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**Flying Operations**

**C-9 OPERATIONS PROCEDURES**

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This volume implements AFD 11-2, *Aircraft Rules and Procedures*. It establishes policy for the operation of C-9A aircraft to safely and successfully accomplish their worldwide aeromedical evacuation, operational support, and CINC support airlift missions. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. This instruction applies to Air Force Reserve (AFRC) units. This instruction does not apply to Air National Guard (ANG) units.

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This document is new and must be completely reviewed. This instruction contains references to the following field (subordinate level) publications and forms which, until converted to departmental level publications and forms, may be obtained from the respective MAJCOM publication office:

Publications: AMCI 11-208, 21-101, 11-301, AMCPAM 11.3, and AMCVA 36-2206 (AMC).

Forms: AMC Form 41, 43, 54, 181, 196, 360, and 423 (AMC).

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**(SCOTT) AFI 11-2C-9, Volume 3, C-9 Operations Procedures, 1 June 2000, is supplemented as follows.** This supplement sets procedures for all C-9A aircraft operating under the direction of the 375 AW/932 AW. The Chief, 375th Operations (OG) Group Stan Eval (375 OG/OGV) has overall responsibility for administration of this supplement. Send comments and suggested improvements to this supplement on

AF Form 847, **Recommendation for Change of Publication**, through channels to 375 OG/OGV, 859 Buchanan Street, Scott AFB IL 62225-5118, or E-mail to: <mailto:375og-ogv@scott.af.mil>.

**SUMMARY OF REVISIONS**

**(SCOTT) This document is substantially revised and must be completely reviewed.**

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## Chapter 1

### GENERAL INFORMATION

#### 1.1. General.

1.1.1. This AFI provides procedures for Air Force C-9A operations and applies to C-9A aircrews and all management levels concerned with operation of the C-9A aeromedical evacuation (AE), operational support (OSA), and CINC support airlift operations. It is a compilation of information from aircraft flight manuals, FLIP publications, and Air Force directives, as well as an original source document for many areas. Basic source directives have precedence in the case of any conflict, revisions, and matters of interpretation. For those areas where this AFI is the source document, waiver authority will be in accordance with paragraph 1.4. For those areas where this AFI repeats information contained in other source documents, waiver authority will be in accordance with these source documents.

1.1.2. All units and agencies involved in or supporting C-9A operations will use this AFI. Copies will be current and available to planning staffs from headquarters to aircrew level. Transportation and base operations passenger manifesting agencies will also maintain a copy of this AFI.

**1.2. Applicability.** This AFI is applicable to all individuals and units operating C-9A aircraft.

#### 1.3. Key Words Explained.

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

1.3.2. "Should" is normally used to indicate a preferred, but not mandatory, method of accomplishment.

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

1.3.4. "**NOTE**" indicates operating procedures, techniques, etc., that are considered essential to emphasize.

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

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

**1.4. Deviations and Waivers.** Do not deviate from the policies and guidance in this AFI, except for safety, or when necessary to protect the crew or aircraft from a situation not covered by this AFI and immediate action is required. The aircraft commander is the ultimate authority and is responsible for the course-of-action to be taken. Report deviations or exception without waiver through channels to MAJCOM Stan/Eval function who, in turn, should notify the OPR (lead command) for follow-on action, if necessary.

1.4.1. Unless otherwise directed in this AFI, waiver authority for the contents of this document is MAJCOM/DO. MAJCOM/DO staff should forward a copy of approved waivers to the OPR (lead command). Request for a long-term (permanent) waiver must be approved by MAJCOM/DO and listed in MAJCOM supplement (see paragraph 1.5.).

1.4.2. Short-notice waiver requests for missions (including missions under TACC operational control) use **Chapter 4**, Waiver Protocol.

**1.5. Supplements.** This document is a basic directive. Each MAJCOM or operational theater may supplement this AFI according to AFD 11-2, *Aircraft Rules and Procedures*. These supplements will not be less restrictive than the basic document. MAJCOM/DO initiate a long-term waiver to basic document. Specify long-term waiver approval authority, date, and expiration date in the appropriate MAJCOM supplement. Limit supplement information to unique requirements only.

1.5.1. Combined Operations. Use only the basic AFI for planning or operations involving forces from lead and user commands. Commanders may use approved MAJCOM supplement procedures with assigned and/or chopped forces provided these forces receive appropriate training and duration is specified. Commanders should not assume or expect aircrews from another command to perform MAJCOM-specific procedures from their supplements unless these provisions are met. Forward questions by aircrew, planners, and staff to the OPR.

1.5.2. Coordination Process. Forward MAJCOM approved supplements (with attached AF Form 673, **Request to Issue Publication**) to HQ AMC/DOV, 402 Scott Dr, Unit 3A1, Scott AFB IL, 62225-5302. HQ AMC/DOV will provide a recommendation to HQ AMC/DO and forward to HQ AFFSA/XOF for approval.

1.5.3. Before publication, units will send one copy of **Chapter 10** to the MAJCOM OPR for validation through their appropriate NAF for coordination and approval. Send final copy to HQ AMC/DOV, parent MAJCOM, and the appropriate NAF.

**1.6. Requisition and Distribution Procedures.** Unit commanders provide copies for all aircrew members and associated support personnel.

**1.7. Improvement Recommendations.** Send comments and suggested improvements to this instruction on AF Form 847, **Recommendation for Change of Publication**, through channels to HQ AMC/DOV, 402 Scott Drive Unit 3A1, Scott AFB IL, 62225-5302, according to AFI 11-215, *Flight Manual Procedures*, and the appropriate MAJCOM Supplement.

**1.8. Definitions.** The explanation or definition of terms and abbreviations commonly used in the aviation community can be found in FAR Part 1; *DOD Flip General Planning*, Chapter 2; and Joint Pub 1-02, *The DOD Dictionary of Military and Associated Terms*. See **Attachment 1** for common terms.

**1.9. Aircrew Operational Reports.** The reporting requirements in this instruction are exempt from licensing in accordance with paragraph 2.11.10 of AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*.

## Chapter 2

### COMMAND AND CONTROL

**2.1. General.** Command and control of tanker and airlift forces is exercised through a network of command and control centers (CCC). CCCs are executive agents for commanders exercising operational control over mobility forces. The CCC network consists of the USTRANSCOM, AMC TACC, theater air operations centers (AOC), air mobility elements (AME), unit CCCs, air mobility control centers (AMCC), tanker airlift control elements (TALCE), combat control teams (CCT), and the USAFE and PACAF AMOCCs.

**2.2. Execution Authority.** Execution approval will be received through the local command post or command element. The operations group commander will be the executing authority for local training missions. Missions operating outside communications channels will be executed by the aircraft commander.

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

2.2.2. Off Station Training Flights. Wing Commanders are the approval authority for off station trainers. Before approval, commanders will carefully review each proposed trainer's itinerary to ensure it justifies and represents the best avenue for meeting training requirements. Commanders approving off station trainers will forward a copy of the planned itinerary to the appropriate NAF/DO and MAJCOM/DOT. AMC crews forward an additional copy to TACC/XOB. Approval authority for AFRC UE off-station trainers is HQ AFRC/DOOM.

2.2.3. Aeromedically dedicated, C-9A aircraft will be launched only for the transport of patients, flight crew training, maintenance tests, ferry flights, or positioning AECMs for an urgent patient movement if no other means of transportation is available. Waiver requests for any of the above policies must be processed through appropriate MAJCOM C2 channels and approved by the Command Surgeon and Director of Operations, in that order.

**2.3. Aircraft Commander Responsibility and Authority.** An aircraft commander is designated for all flights on the flight authorization in accordance with AFI 11-401, *Flight Management*, and applicable command supplement. Aircraft commanders are:

2.3.1. In command of all persons aboard the aircraft.

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

2.3.3. Not Used.

2.3.4. Vested with the authority necessary to manage crew resources and accomplish the mission.

2.3.5. The final mission authority and will make decisions not specifically assigned to higher authority.

2.3.6. The final authority for requesting or accepting any waivers affecting the crew or mission.

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

2.3.8. Responsible for ensuring that only activity authorized by the executing authority is accomplished, unless emergency conditions dictate otherwise.

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

2.4.1. Rerouting or Diverting a Mission. Must be authorized by the execution authority, except in an emergency or when required by en route or terminal weather conditions.

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

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

2.4.2. When directing an aircraft to an alternate airfield, the C2 Center agency will ensure the aircraft commander is provided existing and forecast weather for the alternate, NOTAMs, and appropriate airfield information from the ASRR. If the planned alternate becomes unsuitable while en route, the aircraft commander will coordinate with the C2 Center for other suitable alternates. The C2 Center agency will coordinate with customs and ground service agencies to prepare for arrival. The aircraft commander is final authority on selecting a suitable alternate.

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

**2.6. Operational C2 Reporting.** AMC C2 facilities will normally transmit arrival, departure, and advisory messages to the TACC as appropriate. Aircrews on AMC TACC controlled missions are responsible for transmitting these messages via HF, DSN, etc., when transiting stations without an AMC C2 (fixed or mobile) presence. HF is the primary means of worldwide C2 communications. Crews on missions not in execution by AMC TACC will report to their appropriate controlling agency.

2.6.1. Report movement information (departure, arrival, or diversion) and airlift mission recapitulation (recap) reports (number of patients/passengers, cargo, and special category information) to the appropriate CCC agencies via DSN or HF stations. Provide relay instructions for global HF stations to pass reports to appropriate agencies.

2.6.1.1. Maintenance Discrepancy Reporting. Aircrews on AMC missions transmit maintenance discrepancies (via VHF, UHF, HF, or L-Band SATCOM) to destination C2 Center or, in the absence of a local C2 Center, to the TACC as soon as possible. Crews should not wait until accomplishing the arrival message to call in this information.

2.6.2. Stations Without CCC Agencies. Report movement information (actual time of departure [ATD], estimated time of departure [ETD], actual time of arrival [ATA], departure load data, delay information, etc.) directly to the AMC TACC (as appropriate) as soon as possible, by any means available. After takeoff, relay pertinent data to the appropriate CCC agency by any means available.

2.6.3. En Route Reporting. On aeromedical missions, full time connectivity between the aircraft and CCC is desired (AMC use TACC). Adhere to the following procedures:

2.6.3.1. CONUS. CCC agencies may advise aircrews via the controlling ATC agency to establish contact when communications are needed. Refer to the flight information publication (FLIP) concerning global HF station procedures in contacting MAINSAIL. Periodic "ops normal" calls or continuous monitoring of global HF station frequencies are not normally required. TACC may specify increased reporting procedures.

2.6.3.2. OCONUS. TACC will specify increased reporting procedures (if needed) through a communications plan in the OPLAN, OPOD, FRAG, or Mission Directive. Aircrews will transmit messages to global HF stations for relay to the controlling CCC agency as specified in the communications plan. Maintain listening watch on HF as specified in the communications plan.

2.6.4. Arrival Advisory. On flights when the block time exceeds 4-hours, aircrews transmit HF arrival advisory to the destination CCC agency or, in the absence of a local CCC agency, to TACC or appropriate AMOCC when approximately 2-3 hours from destination. Furnish the following information:

2.6.4.1. Aircraft call sign.

2.6.4.2. Mission number.

2.6.4.3. ETB (estimated time in block).

2.6.4.4. Maintenance status. (See the definitions for a list of maintenance status codes in [Chapter 1](#))

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

2.6.5. Aircrews transmit a UHF or VHF arrival advisory as soon as contact can be established with the destination CCC agency. Include the following information as appropriate:

2.6.5.1. Aircraft call sign.

2.6.5.2. Mission number.

2.6.5.3. ETB.

2.6.5.4. Maintenance status.

2.6.5.5. DV code and requirements.

2.6.5.6. Number of patients and passengers.

2.6.5.7. Hazardous cargo and remote parking requirements.

2.6.5.8. Additional service required.

2.6.5.9. Passenger seat release available for the next mission segment.

2.6.5.10. Fuel Requirements.

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

## **2.7. Mission Commanders.**

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

2.7.1.1. Before entering crew rest for the mission, the mission commander will coordinate with the lead planning agency and the appropriate MAJCOM AMOCC, as required. During this coordination, the mission commander will review mission itinerary and receive points of contact for any aircraft which are non-collocated.

2.7.1.2. The mission commander will ensure required mission briefings are completed by all collocated aircrews. Ensure all takeoff, en route, and recovery requirements are coordinated between all participating aircraft.

2.7.1.3. When non-collocated aircraft are involved, the mission commander (in conjunction with the lead planning agency) will ensure all applicable information, to include rendezvous, abort, and recovery procedures, is relayed to non-collocated aircrews. The mission commander will ensure the controlling agency and all non-collocated crews are informed of all anticipated delays or mission changes.

**2.8. C2 Agency Telephone Numbers.** Units should publish a listing of telephone numbers to assist crews in coordinating mission requirements through appropriate C2 agencies. It should be made readily available to crews by publishing it in the FCB, Read File, or other appropriate publication.

**2.9. Close Watch Missions.** Close Watch missions are designated missions (e.g., CSAF, aeromedical evacuation (AE), PHOENIX BANNER, etc.) which receive C2 special attention. Close Watch procedures are initiated so that all possible actions are taken to ensure on-time accomplishment and notification to the user when delays occur or are anticipated. Promptly notify the appropriate C2 channels of delays, aborts, or other events that affect on-time departure and advise them of the ETIC, new ETD, and ETA. Notify the C2 within 10 minutes of event and confirm that the user and OPR have been advised.

## Chapter 3

### CREW MANAGEMENT

**3.1. Aircrew Qualification.** Primary crewmembers or those occupying a primary position during flight must be qualified or in training for qualification for that crew position. If non-current, or in training for a particular event, the crewmember must be under the supervision of an instructor while accomplishing that event (direct supervision for critical phases of flight).

**EXCEPTION 1:** Senior staff members who have completed a Senior Staff Checkout Course and possess a current AF Form 8, **Certificate of Aircrew Qualification**, may occupy either pilot seat under direct IP supervision. These individuals will log “FP” for Flight Authorization Duty Code on the AFTO Form 781, **AFORMS Aircrew/Mission Flight Data Document**.

**EXCEPTION 2:** During non-critical phases of flight, one pilot at a time may leave their duty station for brief periods to meet physiological needs and to perform normal crew duties.

#### 3.1.1. Pilots:

3.1.1.1. Missions With Passengers. With passengers on board, takeoff, climb-out, flight under actual instrument conditions, approach, and landing may be made by either the pilot or the copilot. Only a pilot that is qualified (current and valid AF Form 8) will occupy a pilot’s seat with passengers onboard the aircraft (AFI 11-401, *Flight Management*). One of the following conditions must be met:

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

3.1.1.1.2. A pilot regaining currency and an IP/EP providing direct IP supervision must be at the controls.

3.1.1.2. Touch and go landings with passengers or cargo are prohibited.

3.1.1.3. Left Seat Training. With operations officer approval, copilots may be allowed to fly in the left seat on local training missions provided they are under IP supervision (direct IP supervision for critical phases of flight and taxi operations). Before occupying the left seat on missions with passenger/patients, copilots must have completed a FP evaluation.

**3.2. Crew Complement.** Use **Table 3.1.** for minimum crew complement for aeromedical evacuation missions and **Table 3.2.** for OSA and SACEUR missions.

**Table 3.1. Crew Complement for AE Missions.**

Crew Position	Basic	Alert	Ferry/Deployment Flight
Aircraft Commander	1	1	1
Copilot	1	1	1
Flight Nurse	2	1	0
AET	3	2	0

**NOTES:**

1. When passengers are carried and no flight nurse or AET is onboard the aircraft, an extra crew-member knowledgeable in passenger procedures will be assigned to the mission at a ratio of one additional crewmember for every 20 passengers.
2. Operations along Category I routes without an operative INS or GPS will require MAJCOM approval and a C-9 certified navigator for the overwater portion.
3. The GPMRC/TPMRC or tasking AE command element will coordinate with the CCC or flying unit operations officer whenever the AECM crew complement is other than prescribed above.
4. An augmented ferry/deployment flight crew may be formed by adding a second aircraft commander (or higher qualification) pilot to the crew complement listed above. Crews may be augmented only during ferry flights/contingency deployments between theaters, and only when litters and curtains have been set up to ensure adequate crew sleeping provisions. Flight nurses and AETs may be added if mission requirements dictate during deployment missions provided aircraft fuel and oxygen limits are not exceeded.
5. The group or squadron senior nurse executive is the final authority for increasing or decreasing the number of aeromedical evacuation crewmembers assigned to an aeromedical evacuation mission to meet patient requirements. The GPMRC/TPMRC or tasking AE command element will coordinate with C2 or the flying organization operations officer any time the AE complement deviates requirements of this AFI.

**Table 3.2. Minimum Crew Complement for OSA and SACEUR Missions.**

<b>Crew Position</b>	<b>Basic</b>
Pilot	1
Copilot	1
CSO	1
FA	2

**NOTE:**

1. CSO is required for SACEUR missions only.
- 3.2.1. Minimum crew complement for training flights is an Instructor or Evaluator Pilot and one (qualified or unqualified) copilot. A safety observer should be added to the crew when possible.
- 3.2.2. Augmented crews are required when a mission cannot be safely completed within a basic FDP. Augmentees must be current and qualified in the aircraft and mission ready in accordance with AFI 11-2C9AV1, *C-9 Aircrew Training*. In those situations requiring augmentation, the crew must be augmented from the start of the duty period. MAJCOM/DO approval is required for additional crewmembers to join the mission en route for augmentation. If augmentees are added to the crew, the crew's FDP will be computed based on the FDP of the most limited person.

**3.3. Scheduling Restrictions.** Crewmembers will not be scheduled to fly nor will they perform crew duties:

- 3.3.1. When the maximum flying time limits of AFI 11-202V3, *General Flight Rules*, will be exceeded.
- 3.3.2. After consuming alcoholic beverages within 12-hours of takeoff or when under the influence of alcohol.
- 3.3.3. Do not takeoff early (prior to scheduled departure time) if the early takeoff time would violate these restrictions.
- 3.3.4. After consuming alcoholic beverages within the 12-hour period prior to assuming ALFA, BRAVO or Charlie standby force duty.
- 3.3.5. Within 72-hours of donating blood. The flying unit commander must approve the donation of blood by crewmembers in a mobility assignment or who are subject to flying duties within this 72-hour period. Crewmembers should not normally donate blood.
- 3.3.6. When taking oral or injected medication unless individual medical waiver has been granted by the Command Surgeon. Crewmembers may not self medicate except IAW AFI 48-123, *Medical Examinations and Standards*. The following is a partial list of medications, which may be used without medical consultation:
- 3.3.6.1. Skin antiseptics, topical anti-fungals, 1-percent Hydrocortisone cream, or benzoyl peroxide for minor wounds and skin diseases which do not interfere with the performance of flying duties or wear of personal equipment.
  - 3.3.6.2. Single doses of over-the-counter aspirin, acetaminophen or ibuprofen to provide analgesia for minor self-limiting conditions.
  - 3.3.6.3. Antacids for mild isolated episodes of indigestion.
  - 3.3.6.4. Hemorrhoidal suppositories.
  - 3.3.6.5. Bismuth subsalicylate for mild cases of diarrhea.
  - 3.3.6.6. Oxymetazoline or phenylephrine nasal sprays may be used by aircrew as "get me downs" should unexpected ear or sinus block occur during flight. These should not be used to treat symptoms of head congestion existing before flight.
- 3.3.7. Within 24-hours of compressed gas diving (including scuba); surface supplied diving, or hyperbaric (compression) chamber exposure and aircraft pressurization checks that exceed 10 minutes duration.
- 3.3.8. Within 12-hours after completion of a hypobaric (altitude) chamber flight above 25,000-feet. Personnel may fly as passengers in aircraft during this period, provided the planned mission will maintain a cabin altitude of 10,000-feet MSL or less. For altitude chamber flights to a maximum altitude of 25,000-feet or below, crewmembers may fly immediately as crewmembers or passengers if their cabin altitude does not exceed 15,000-feet.
- 3.3.9. Crewmembers who have received medical care or who have engaged in activities that may reduce crew efficiency are scheduled to fly only with the concurrence of a flight surgeon.

### **3.4. Alerting Procedures.**

- 3.4.1. Crew alerts will normally be 3+00 hours prior to scheduled takeoff time to allow 1-hour for reporting and 2+00 hours for mission preparation.

3.4.1.1. Self alerting may be requested by the aircraft commander, but is not normally recommended on operational missions to avoid potential crew duty day (CDT) limitations resulting from mission changes. Early alerting to provide additional reporting or mission preparation time is authorized when absolutely essential for mission accomplishment. Late alerting is also authorized; however, all requests for changes to standard alerting times must be coordinated through the appropriate CCC.

3.4.1.2. Self-alert procedures may be used for local training missions.

3.4.2. A crew will not be alerted until the aircraft is in commission or there is reasonable assurance that the estimated time in commission (ETIC) will meet the proposed takeoff time.

3.4.3. The aircraft commander may request crew enhancement crew rest (CECR) when he or she desires a later legal for alert time to normalize the crew work/rest cycle or enhance messing options immediately prior to crew alert. To minimize adverse effects on established schedules, aircraft flow, and capability, CECR requests should be of minimum duration and normally be limited to de-positioning legs. Send requests through C2 Center channels for approval decision. When requests are disapproved, the controlling C2 Center will notify the aircraft commander through C2 channels of the reason for disapproval. CECR is not an alternative to a 'safety-of-flight' delay and should not be used as such. If the AC deems extra crew rest is necessary for continued safe flight and mission accomplishment, the AC has the responsibility to declare safety of flight when the situation warrants, not after CECR is disapproved.

3.4.4. Aircrew release policy is as follows:

3.4.4.1. On the aircrew's initial entry or reentry into crew rest, the controlling C2 agency will establish an expected alert time. The crew will not be alerted or otherwise disturbed before this time except for emergencies.

3.4.4.2. The latest allowable alert time will be 6-hours after the expected alert time for all missions. If circumstances warrant, the aircraft commander may extend the window to a maximum of 8-hours. (When advised the crew will be deadheading, the aircraft commander may extend the window to 12-hours). Air Reserve Component (ARC) crewmembers may extend the window as necessary to allow deadhead return to home station within Firm Scheduled Return Time (FSRT). The controlling C2 agency will not request the aircrew accept more than a 6-hour window.

3.4.4.3. If the controlling C2 agency determines a crew will not be alerted in the allowable time span, then at the time of determination (but no earlier than the crew's expected alert time) the controlling C2 agency will reenter the crew into crew rest of not less than 12-hours and establish a new expected alert time.

3.4.4.4. When the latest allowable alert time expires without being alerted, then:

3.4.4.4.1. The crew reenters crew rest of not less than 12-hours.

3.4.4.4.2. The aircraft commander will contact the controlling C2 agency to determine the new expected alert time and establish a new latest-allowable alert time.

### **3.5. Stage Management.**

3.5.1. Mechanical Stage. Mechanical stages may be established by the CCC where no crews are staged. The stage is created when a mission is delayed or aborted and the crew goes into crew rest.

Mechanically staged crews become first out in the same direction when legal for alert. An inbound crew may be bumped from the mission even though they have sufficient duty time remaining to complete that mission.

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

**NOTE:** CDT/FDP includes both military duty and civilian work and begins when reporting for the first duty period (military or civilian).

3.6.1. CDT and FDP both begin 1-hour after alert. **EXCEPTIONS:**

3.6.1.1. Self-alerts: CDT and FDP begin at scheduled or established mission reporting time.

3.6.1.2. ALFA standby: CDT and FDP begin when the crew is told to launch.

3.6.1.3. BRAVO standby: CDT and FDP begin when the crew shows for duty.

3.6.1.4. Crewmembers performing other duties prior to flight related duties: CDT and FDP begin when reporting for other duties.

3.6.1.5. Crewmembers alerted early to perform mission-related duties: CDT and FDP begin when reporting for these duties.

3.6.2. The length of FDP will be established by the mission directive or controlling CCC when the crew shows for duty and is briefed for the mission. FDP will not be extended to an augmented day after a basic FDP has begun regardless of crew composition. FDP will not be based on crew composition, but rather on mission requirements.

3.6.3. FDP ends at engine shut down following completion of the final mission segment.

3.6.4. Normally, CDT ends 45-minutes after engine shutdown at the end of the mission. If any crewmember must perform mission-related duties past 45-minutes, CDT does not end until that crewmember completes these duties. These duties include up or down loading, servicing, debriefing, mission planning, etc. Except when authorized by unit commanders at home station or deployed locations, crewmembers will not be used for mission-related duties supporting other missions. Post mission duties will not be performed after the maximum CDT has expired.

3.6.5. Basic Crew FDP:

3.6.5.1. Maximum FDP for a basic crew is 16-hours. The basic FDP is 12-hours without an operative autopilot pitch axis.

3.6.5.2. Maximum CDT for a basic crew is 18-hours.

3.6.6. Augmented Crew FDP:

3.6.6.1. Maximum FDP for an augmented crew (operational missions only) is 24+00 hours. FDP is 16 hours without an operative autopilot pitch axis. Only the pilot portion of the crew need be augmented.

3.6.6.1.1. An augmented C-9 crew is formed by including an additional aircraft commander qualified pilot (FP or above) to the basic crew complement. C-9s will be augmented only when required for mission accomplishment during actual contingency deployments/ferry flights. Litters will be provided for the crew's rest.

3.6.6.2. Basic crews will not be augmented after FDP has started. (**EXCEPTION:** See paragraph 3.2.2.)

3.6.6.3. Maximum CDT for augmented crews is 24+45 hours and only authorized for contingency deployment aircraft.

**NOTE:** No more than two intermediate stops are authorized past 16-hours.

3.6.7. Training FDP:

3.6.7.1. Maximum FDP for training missions is 16-hours.

3.6.7.2. Duty day for accomplishing transition training during training missions is 12-hours.

**NOTE:** ARC crews may perform transition on C-9A training missions provided time from start duty does not exceed 16-hours and actual flight duty does not exceed 12-hours.

3.6.8. If autopilot fails after departure, consider mission requirements and determine best course of action to preclude further mission delays due to reduced FDP. Best course of action may include divert to an airfield with maintenance capability. Contact C2, coordinate intentions, and comply with the preceding limitations.

3.6.9. Deadhead Time. Duty time for crewmembers in passenger status, positioning or de-positioning for a mission or mission support function.

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

3.6.9.2. Crewmembers may deadhead following primary crew duties if they will not exceed an augmented FDP beginning at reporting time for primary crew duties.

3.6.10. CDT/FDP Extensions. MAJCOM/DO (AMC/DO for AMC directed missions through the TACC) is the waiver authority for all CDT/FDP extensions. Waivers are not normally authorized for missions under the operational control of the home unit (locals). If a waiver is required on a local mission due to urgent situational factors, the operations group commander or equivalent is the waiver authority.

3.6.11. Flight examiners administering evaluations will not exceed an augmented FDP.

**3.7. Crew Rest.** Use AFI 11-202V3 and the following: Crewmembers will enter crew rest a minimum of 12-hours prior to alert time or, when self alerting, 12-hours prior to reporting time.

3.7.1. Home-Station Pre-departure Crew Rest. All primary and deadhead crewmembers should enter crew rest 24-hours prior to alert time for missions scheduled away from home station for more than 16-hours. Crewmembers may perform limited non-flying duties, including mission planning, during the first 12 hours of this period. OG/CC is waiver authority for the first 12-hours of pre-departure crew rest.

**EXCEPTION:** AFRC according to AFI 11-202V3 and AFRC supplement. Do not manifest dead-head crewmembers as passengers to reduce or eliminate crew rest requirements. MAJCOM/DO is waiver authority for minimum 12-hour deadhead crewmember crew rest requirement.

### 3.7.2. En route Crew Rest and Ground Time:

3.7.2.1. Crew rest normally begins 45-minutes after final engine shutdown. The 45-minute time provides a crew with time to complete normal post-flight duties. These duties include, but are not limited to, refueling, down loading of patients and equipment, performing maintenance, or completing mission debriefings.

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

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

3.7.2.4. A minimum 15+45 ground time between engine shutdown and mission takeoff should normally be planned unless extended post flight duties are anticipated. This allows for 45-minutes post flight duties, 12-hours rest, one hour to show, and two hours to takeoff.

3.7.2.5. The aircraft commander may modify normal ground time:

3.7.2.5.1. In the interest of safety.

3.7.2.5.2. Not 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 patients, and other factors peculiar to the mission. The controlling C2 agency will not ask the aircraft commander to accept less than a normal ground time. Waivers for exercises and contingencies are according to AFI 11-202V3.

3.7.2.5.3. To a maximum of 36-hours, when the crew has completed three consecutive near-maximum FDPs.

**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 affects of fatigue while flying on several consecutive days or transiting several time zones.

### 3.7.3. Post-Mission Crew Rest (PMCR). **NOTE:** PMCR is not applicable to AFRC crews.

3.7.3.1. Crewmembers, returning to their home base, will be given sufficient time to recover from the cumulative effects of their deployed mission and tend to personal needs. PMCR begins immediately on mission termination.

3.7.3.2. Provide one hour of PMCR time (up to a maximum of 96 hours) for each 3-hours TDY when the duty exceeds 16-hours away from home-station. This time is in addition to and will not run concurrently with predeparture crew rest (not applicable to continuing missions).

3.7.3.3. The OG/CC or acting representative is designated PMCR waiver authority and will not delegate this authority below the OG/CC level. Limit PMCR waivers to extraordinary circumstances only and must not be used for day-to-day operations.

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

3.7.5. Crew Chief Work/Rest Plan. The crew chief must have the opportunity to sleep 8-hours in each 24-hour period.

3.7.6. Crew rest waivers approved for exercises and contingencies will be published in the OPORD or OPLAN or CONOPS.

### **3.8. Standby Force Duty.**

#### **3.8.1. Types of Standby Forces:**

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

3.8.1.2. BRAVO Standby Force. An aircraft or aircrew capable of launching in 3-hours. Crewmembers are given 12-hours of pre-standby crew rest. Crews are legal for alert after pre-standby crew rest. Preflight duties, if required, interrupt crew rest. A crew will not stay on BRAVO standby duty for more than 48-hours. After 48-hours, the crew must be launched, released, or entered into pre-departure crew rest. CDT begins when the crew shows for duty.

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

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

#### **3.8.2. Standby Force Crew Management:**

3.8.2.1. Commanders will not use a standby crew to preflight other than their standby aircraft, or to do any non-mission duties while on standby.

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

3.8.3.1. Standby duty and pre-departure crew rest may be concurrent if notification is provided at least 12-hours before alert.

3.8.3.2. If started, post-standby crew rest must be completed before the start of pre-departure crew rest.

3.8.3.3. If a crewmember is dispatched on a mission, compute the post-mission crew rest time on standby time plus mission time.

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

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

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

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

**3.9. Orientation Flights and Incentive Flights.** Refer to DoD 4515.13-R, *Air Transportation Management*, AFI 11-401, *Flight Management*, and MAJCOM supplement.

### **3.10. Interfly.**

3.10.1. Interfly is the exchange and/or substitution of aircrew members and/or aircraft between mobility units to accomplish flying missions. OG/CC, or as specified in the appropriate MAJCOM supplement (AFRC use AFRC/DO approval-level) may authorize the interfly of assigned 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. During contingencies, exercises, or designated "interfly" missions, interfly operations will be conducted under the following conditions or as specified in the OPLAN or CONOPS.

3.10.2. When approved, interfly during normal day-to-day operations under the following conditions:

3.10.2.1. Aircraft ownership will not be transferred.

3.10.2.2. As a minimum, crews will be qualified in the MDS and model as well as systems or configuration required to fly the aircraft and/or mission.

3.10.2.3. During interfly, crewmember(s) will follow "basic" operational procedures (see Combined Operations, paragraph 1.5.1.) and must thoroughly brief MAJCOM-specific items.

3.10.2.4. Initiate interfly approval request by the unit or agency requesting the agreement by memo or message format to the OG/CC controlling the resource. Each commander involving resources (personnel or aircraft) (or MAJCOM, if appropriate) must concur with interfly proposal. Request must include details of the deployment or mission including; aircrew name(s), duration, or special circumstances.

3.10.2.5. Flight Mishap accountability is MAJCOM designated by PEID code for mishap aircraft.

3.10.2.6. Ground Mishap accountability in accordance with AFI 91-204, *Safety Investigations and Reports*.

## Chapter 4

### AIRCRAFT OPERATING RESTRICTIONS

#### *Section 4A—General*

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

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

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

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

4.1.4. Engine performance, aircraft attitude, vertical velocity indications, altitude, speed, and heading instruments should be operative in both pilot positions. For instruments with both analog and digital displays, either the analog or the digital presentation is acceptable.

**4.2. Policy.** It would be impractical to prepare a list that would anticipate all possible combinations of equipment malfunction and contingent circumstances. This chapter lists the equipment and systems considered essential for routine as well as contingency operations. The list does not necessarily include all equipment or systems essential to airworthiness (e.g. rudder, ailerons, elevators, flaps, tires, etc.).

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

4.2.2. If, after exploring all options, an aircraft commander determines a safe launch is possible with an item inoperable (beyond a particular restriction) the aircraft commander may request a waiver. Use C2 channels to notify the appropriate execution agency of intentions. Plan a minimum 1-hour response to the waiver request.

**4.3. Waiver Protocol.** Waiver to operate with degraded equipment or waiver to USAF policy exceeding this AFI may be granted on a case-by-case basis and only in exceptional circumstances. Waiver authority is based on “who” has operational control and execution of the aircraft performing a specific mission. The aircraft commander determines the need for a waiver and initiates the request.

4.3.1. Local Missions (executed by unit OG/CC or equivalent). Waiver authority for active duty units flying local missions is the active duty OG/CC or equivalent. For Unit Equipped (UE) ARC units, waiver authority is the OG/CC or equivalent.

4.3.2. AMC-Directed Missions. Waiver authority for active duty and AFRC or ANG units flying AMC or AMC-directed missions controlled by the AMC/TACC (includes HQ AMC Operational Readiness Inspections) is HQ AMC/DO. HQ AMC/DOV personnel are the authorized agent and maintain 24-hour watch through the appropriate TACC cell (East or West).

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

4.3.4. AFRC-Directed Missions (executed by HQ AFRC). The appropriate ARC headquarters maintains C2 and waiver authority for AFRC crews performing any AFRC-directed mission prior to mobilization; waivers must be obtained from HQ AFRC/DO.

4.3.5. Non-AMC Missions. For user command assigned aircraft according to Air Force Policy Directive (AFPD) 10-9, (e.g., PACAF, USAFE, or AFRC) waiver authority is the appropriate MAJCOM/DO, or as specified in MAJCOM supplement.

**4.4. Technical Assistance Service.** The aircraft commander may request (at anytime in the decision process) technical support and additional assistance from their home unit, MAJCOM staff, and maintenance representatives.

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

4.4.2. If beyond C2 communication capability, the aircraft commander may deviate from this chapter as specified in [Chapter 1](#). Report deviations (without waiver) through channels to appropriate MAJCOM/DO within 48-hours. Units must be prepared to collect background information and submit a follow-up written report upon request.

**4.5. Supplements.** Each MAJCOM may supplement the MEL (see [Chapter 1](#)).

**4.6. Gear Down Flight Operations.** During peacetime, gear down flight operations will be limited to those sorties required to move the aircraft to a suitable repair facility. Gear down flight should only be

considered and approved after all avenues to repair the aircraft have been exhausted. Each gear down sortie must be approved by the MAJCOM/DO.

4.6.1. Standard climb-out flight path charts in T.O. 1C-9A-1-1 are not applicable to gear-down flights. Takeoff will not be attempted unless there is reasonable assurance that adequate obstacle clearance can be maintained. This limitation must be considered when planning en route stops and alternates.

4.6.2. Takeoff data should be validated by NAF/DOV or OG/OGV, time and communications capability permitting.

**4.7. High-Speed Taxi Checks.** Performed by designated FCF aircrews according to T.O. 1C-9A-6 and maintenance T.O.s. To minimize brake and tire wear, configure the aircraft with the minimum fuel practical to accomplish high speed taxi checks. Ensure enough fuel is onboard in the unexpected circumstance that the aircraft becomes airborne. Aircrew will check Critical Field Length for the gross weight associated with the highest speed to be attained. Minimum runway to conduct high speed check is CFL plus an additional 35 percent (in no case less than 2,000-feet) to allow for less than maximum antiskid braking. The anti-skid system will be on and operational.

**4.8. C-9 Minimum Equipment List.** Use the Minimum Equipment Lists (MEL) on [Table 4.1](#) through [Table 4.24](#), and Missing Parts List (MPL) on [Table 4.25](#) through [Table 4.28](#), to assist C-9 aircraft commander and crew determine required operational equipment for continuance of an airlift mission. If approval for a one-time flight, make a AFTO Form 781A entry according to T.O. 00-20-5, and will include any restrictions imposed (crew composition/ qualifications, patient/passenger restrictions).

4.8.1. General. Corrections to minor discrepancies or replacement of nonessential equipment should be carried forward until capability (skills, parts, and schedule) permits accomplishment without causing a scheduled deviation.

4.8.2. Explanation of MEL Tables. **Column A.** Self-explanatory; **Column B.** Number of units on the aircraft; **Column C.** Exceptions/Remarks. Where no exceptions are listed, the system must be operational. Where the (#) sign appears, the crew must have a predetermined plan of action in the event of emergency or subsequent failure. Refer to flight publications for assistance.

4.8.3. Operations under MPL. The various external doors, fairings, and covers have been grouped according to their effect on performance and each group has been assigned performance penalties and limitations.

**Table 4.1. Air Conditioning.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Air conditioning systems	2	Both may be inoperative, provided the flight altitude is limited to 10,000 feet MSL or below, the flight is unpressurized, and the ram air valve system is operative. #One may be inoperative for pressurized flight provided the flight altitude is limited to FL250 or below.
2	Air CONDITIONING SUPPLY TEMPERATURE HIGH indicating system	2	One required for each operative air conditioning system or the affected system is placed in OFF or HP BLD OFF.
3	Air conditioning supply pressure indicating system	1	One required for each operative air conditioning system.
4	Cabin and duct temperature indicating system	1	May be inoperative provided the system shut down thermal switch and automatic temperature control system are operative.
5	Air conditioning automatic shut-off system (ARM/OVRD Switch)	1	#May be inoperative, provided both air conditioning systems are turned OFF prior to take-off and not turned on until a height of 800 feet AGL, or flap retraction is completed, whichever results in a higher altitude.
6	Air conditioning flow control valve	2	#One required for each operative air conditioning system. For each inoperative flow control valve, the air conditioning supply switch will be left OFF.
7	Air conditioning pressure regulator valve	2	#One required for each operative air conditioning system. For each inoperative air conditioning pressure regulator valve, the air conditioning supply switch will be left OFF.
8	Ram Air valve	1	May be inoperative in open position provided the ground condition air check valves are operative. May be inoperative in the closed position if both air conditioning systems are operative.
9	Compressor discharge or turbine inlet thermal switches	4	#All may be inoperative provided the air conditioning system is not operated prior to becoming airborne and is turned OFF prior to landing.
10	System shutdown thermal switch	2	One required for each operative air conditioning system.
11	Heat exchange cooling air fan	2	#Both may be inoperative provided air conditioning is not operated prior to becoming airborne and is turned OFF prior to landing.
12	Air conditioning water separator	2	#Either or both may be inoperative provided the respective air conditioning system is OFF.
13	Ground air conditioning check valve	2	#Both may be inoperative for unpressurized flight, provided the ground condition air door is closed and latched.
14	Cooling air diverter valve	2	Left-hand valve may be inoperative provided when a failure causes the ram air port to be closed, the flight altitude is limited to FL250 or below, and the left-hand air conditioning system is turned off prior to becoming airborne. If failure causes the fan air port in either system to be closed, the affected air conditioning system must be kept OFF prior to becoming airborne and turned OFF prior to landing.

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
15	Eighth stage air temperature sensor (330° sensor)	2	#One may be inoperative provided the respective air conditioning supply switch is used in the HP BLD OFF position. #Both may be inoperative provided both air conditioning supply switches are in HP BLD OFF position, and flight altitude is limited to 10,000 feet MSL or below.
16	High pressure bleed shut-off temperature sensor (550° sensor)	2	#One may be inoperative provided the respective air conditioning supply switch is used in the HP BLD OFF position, and the flight is not made in icing conditions. #Both may be inoperative provided both air conditioning supply switches are used in the HP BLD OFF position, flight altitude is limited to 10,000 feet MSL or below, and the flight is not made in icing conditions.
17	Radio rack fan off caution system	1	#May be inoperative provided an audible check is made for satisfactory fan operation prior to each takeoff.
18	Radio rack cooling fan	1	#May be inoperative provided: (1) Ground operation of electronic equipment is limited to a maximum 45 minutes, 30 minutes if comm radios are used. See flight manual for exceptions. (2) Both air conditioning systems are available for pressurized flight, and the radio rack cooling selector switch is in the VENTURI position. <b>NOTE:</b> The fan must be operative for pressurized flight dispatched with one air conditioning system off. Effects on live animal transport should be considered
19	Radio rack fan check valve	1	#May be inoperative if failed in the open position. Minimize extended overwater operation. When it has failed in the closed position, the switch is placed in the VENTURI position, both air conditioning systems must be available for pressurized flight, and ground operation of electronic equipment is limited as in item 18.
20	Cabin pressure automatic controller system	1	#May be inoperative provided manual pressurization system is operative. #May be inoperative for unpressurized flight IAW AFI 11-202V3 provided the cabin outflow valve control lever is selected to the open position.
21	Cabin air outflow valve	1	#May be inoperative for unpressurized flight IAW AFI 11-202V3 provided the cabin outflow valve is secured in the open position.
22	Cabin pressure safety valve	2	#Either or both may be inoperative for unpressurized flight in accordance with AFI 11-202V3 provided the cabin outflow valve is secured in the open position.
23	Cabin pressure warning system	1	May be inoperative provided pressurized flight is limited to 10,000 MSL or below. May be inoperative for unpressurized flight IAW AFI 11-202V3.
24	Cabin altitude and differential pressure indicator	1	#Cabin altitude indicator may be inoperative provided cabin differential pressure indicator is operative. Cabin differential pressure indicator may be inoperative provided cabin altitude indicator is operative. May be inoperative for unpressurized flight.

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
25	Cabin rate of climb indicator	1	May be inoperative for pressurized flight provided all other components of pressure control system are operative. May be inoperative for unpressurized flight.
26	Cabin/flight compartment auto-temperature control	2	#Either or both systems temperature control may be inoperative provided manual control is operative or respective air conditioning system is in OFF.
27	Temperature control valve position indicating system	2	Either or both may be inoperative provided the respective automatic temperature control is operative.
28	Water separator discharge thermostat	2	#One required for each operative system.
29	Cabin/flight compartment temperature control	2	#Either or both may be inoperative provided the respective air conditioning system is turned OFF and the flow control valve is locked in the closed position.
30	Water separator temperature control valve	2	#Either or both may be inoperative provided the respective air conditioning system is turned OFF and the flow control valve is locked in the closed position.
31	TAIL COMPartment TEMPERATURE HIGH indicating system	1	
32	Turbine bypass valve	2	#Both valves may be inoperative provided they are secured in the open position. One valve may be inoperative in the closed position provided flight altitude is limited to FL250 or below.
33	Air conditioning pilot pressure regulator	2	#One required for each operative air conditioning system.

**Table 4.2. Autopilot.**

ITEM	A EQUIPMENT	B NO	C EXCEPTIONS/REMARKS
1	Pitch axis computer	1	#May be inoperative. Refer to paragraph 3.6. for reduced crew duty time.
2	Roll axis computer	1	#May be inoperative. Refer to paragraph 3.6. for reduced crew duty time.
3	Elevator and aileron drive servos	2	#May be inoperative. Refer to paragraph 3.6. for reduced crew duty time.
4	Autopilot trim indicator	1	Respective axis indicator must function if the autopilot is used on that axis.
5	Autopilot controller	1	#May be inoperative. Refer to paragraph 3.6. for reduced crew duty time.
6	Stability augments (AFCS)		
	Stability augments computer	1	#May be inoperative provided flight speed is restricted to .78 mach.
	Yaw damper actuator	1	#May be inoperative.
	Mach trim actuator	1	#May be inoperative provided it is cranked to the retracted position and flight speed is restricted to .78 mach.

ITEM	A EQUIPMENT	B NO	C EXCEPTIONS/REMARKS
7	Central air data computer	2	#1 CADC may be inoperative provided the flight speed is restricted to .78 mach; #2 CADC may be inoperative.
8	Mach trim compensator switch	1	#May be inoperative, provided flight speed is restricted to .78 mach.
9	Split axis servo switches	3	#May be inoperative. Refer to paragraph 3.6. for reduced crew duty time.
10	Autopilot disengage light	1	Must function for pilot using the autopilot.
11	Autopilot control wheel disengage switches	2	May be inoperative provided the primary trim switch disengages the autopilot.

**Table 4.3. Communications.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Audio control panel	3	One required at the pilot and copilot positions.
2	Integral amp and volume control loudspeaker (overhead speaker)	2	Not required if pilot and copilot headsets are available.
3	Dynamic interphone microphone (hand mike)	3	One required at pilot and copilot positions. Not required if headset with boom mike is available.
4	Oxygen mask microphone	3	One required at each occupied flight crew position.
5	Headset, PL-55 plug, interphone	3	Same as above.
6	Public address system	1	May be inoperative provided cabin interphone and cabin call systems are operable, and alternate normal and emergency procedures are established. Do not depart a station where repairs can be made.
7	Flight interphone system	1	
8	Service interphone system (cabin to cockpit), (cockpit to cabin)	1	May be inoperative provided the announcement mode of the public address system is operative or cabin call system is operative.
9	VHF/UHF/HF communication systems	-	VHF1 and others as required by regulations, mission directive, or flight information publications.
10	Emergency Locator Transmitter (ELT) System	1	#In the event of malfunction or failure of the ELT system, the airplane may continue the flight, or series of flights, but may not depart a station where repairs or replacement can be made.
11	IFF	1	Mode IV may be inoperative depending upon mission requirements.
12	Static dischargers	22	Two required for each wing tip. Two required for each elevator tip. One required for tail cone. One required on the vertical fin tip.

**Table 4.4. Electrical Power.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Generator system (includes constant speed drive)	2	#One may be inoperative provided APU generator operating and furnishing power to the bus, and ALL other components of the electrical power system are operative. If a CSD has been disconnected and the malfunction cannot be repaired prior to continued flight, service the CSD as follows: The CSD transmission oil should be serviced to obtain an oil level between the top and one-fourth inch above the green band.
2	Crosstie relay (AC)	1	#May be inoperative provided the crosstie relay is open, both generators are operative, and the APU generator is available to power either bus. The APU must be running during flight, and both bus switches must be ON.
3	Emergency power transfer relay (AC) (DC)	2	
4	Ground service external power relay	1	#May be inoperative with operative APU.
5	A C ground service relay	1	
6	Battery charger	1	
7	GENERATOR OFF annunciators	2	Both may be inoperative provided its respective load meter is operative.
8	AC Bus power failure caution system	2	
9	Frequency meter system (AC)	1	#May be inoperative provided electrical power from each generator can be applied to its respective load bus after engine restart from a complete engine shutdown. If dispatch based on APU generator, place APU generator on desired bus after restart of APU from a complete shutdown.
10	Loadmeter system (AC)	2	One for each operative generator.
11	CSD oil temperature indicating	2	Rise function may be inoperative.
12	CSD oil pressure low annunciator	2	
13	Transformer/rectifier	4	One may be inoperative provided the inoperative unit is electrically isolated from the operative electrical system.
14	Crosstie relay (D. C.)	1	
15	Batteries	2	
16	Battery relay	1	
17	Ground refueling relay	1	
18	DC BUS OFF annunciator	1	
19	DC TRANSFER BUS OFF annunciator	1	
20	DC bus power failure caution system	1	
21	DC loadmeter indicators	4	One may be inoperative on left and right system, provided DC voltmeter and DC bus power failure system are operative.
22	DC voltmeter	1	
23	AC and DC EMERGENCY BUS OFF annunciator	2	
24	Emergency (DC to AC) inverter	1	
25	Emergency power switch	1	
26	Battery vent fan (if installed)	1	May be inoperative.
27	60-cycle converter (if installed)	2	Both may be inoperative if no patients are carried who require its use. If one fails, mission may continue with concurrence of MCD.

**Table 4.5. Life Support/Furnishings.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Flotation devices		As Required. Designated overwater flights require sufficient rafts and LPUs to accommodate all passengers/patients and crewmembers.
2	Lower cargo compartment removable liners		All liners required to be installed in compartments where cargo is carried.
3	Rear entrance door strap (if installed)	1	Strap function may be inoperative when a cabin attendant is positioned on the door jump seat, and a passenger announcement is made to stay clear until the door is open.

**Table 4.6. Fire Protection Circuits.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Engine fire detection systems (per engine)	2	#One complete system on each engine (A or B) may be inoperative.
2	APU fire detection systems	2	#One complete system (A or B) may be inoperative. Both may be inoperative provided APU is not being used.
3	Fire extinguisher systems	2	
4	Fire extinguisher agent discharge indication °system	2	#One indicating system may be inoperative provided: (1) Before each flight it is determined that the cylinder pressure and quantity are normal, and; (2) Procedure requires discharging bottle with operable indicator light first.
5	APU ground fire warning horn	1	#May be inoperative for ground operation, provided the system is monitored at the cockpit control panel.
6	Smoke Alarms	2	#Do not depart a location where repairs can be made.

**Table 4.7. Flight Controls.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Primary longitudinal trim actuator motor	1	
2	Alternate longitudinal trim actuator motor	1	
3	Primary longitudinal trim motor control contactor	2	
4	Primary longitudinal trim brake control relay	2	
5	Primary longitudinal trim control wheel switch	2	
6	Primary longitudinal trim brake manual override switch	1	
7	Alternate longitudinal trim, motor control relay	2	#May be inoperative provided failure is confined to auto-pilot input and the alternate system functions normally from the controls on the pedestal.
8	Alternate longitudinal trim, brake control relay	1	

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
9	Alternate longitudinal trim brake	1	
10	Alternate longitudinal trim, motor limit switch	2	May be inoperative provided failure is confined to the travel limited function and the alternate system otherwise operates normally.
11	Cylinder assembly, hydraulic power, elevator	2	
12	Valve assembly, hydraulic power control, elevator	2	
13	Indicating system, ELEVATOR POWER ON	1	#May be inoperative provided all other hydraulic pressure and quantity gauges and warning light are operative and accumulator condition and pressure are normal.
14	Flap control valve (dual)	1	
15	Flap control valve, 2-speed	2	
16	Flap indicating system	2	#One system may be inoperative provided it is determined the flaps are operable through their full range, a visual inspection before each takeoff verifies that both flaps are in takeoff position, and that no asymmetry exists.
17	Speedbrake/spoiler, hydraulic actuator assembly	4	
18	Automatic ground spoiler system	1	#May be inoperative provided the spoiler actuator has failed in the flight mode and the autospoiler circuit breaker is pulled. Add 435 feet (dry)/500 feet (wet) to landing roll.
19	Rudder, integral control, hydraulic cylinder assembly	1	
20	Rudder hydraulic shutoff valve assembly	1	
21	Rudder limiter (Q-Limiter) system	1	
22	Rudder control manual annunciator	1	
23	Takeoff warning horn	1	#May be inoperative--components monitored by the warning system must be checked prior to takeoff.
24	Control surface dampers	8	One rudder damper may be inoperative. One damper may be inoperative on each aileron.
25	Slat disagreement annunciator	1	
26	SPOILER DEPLOYED annunciator	1	May be inoperative provided spoiler surfaces are visually verified stowed after control system check and before each takeoff

**Table 4.8. Fuel.**

**NOTE:** Requirements for forward, center, aft, and wing tank fuel boost pumps and fuel indicating systems are not applicable if the quantity of fuel in the tanks can be determined by other means, or fuel from those tanks is not required.

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Main tank fuel boost pump (AC)	4	#Two may be inoperative provided: (1) Flight is below suction feed altitude when only main fuel is available. (2) Both pumps are not in the same tank. (3) When two pumps are inoperative, the remaining pumps must be powered from separate AC bus systems. (4) Additional fuel is loaded in each tank with inoperative pump IAW flight manual.
2	Center tank fuel boost pump (AC)	2	#One may be inoperative provided all tank quantity systems are operative.
3	Fuselage tank fuel boost pump (AC)	4	#Two may be inoperative provided: (1) Both pumps are not the same tank. (2) When two pumps are inoperative, the remaining pumps must be powered from separate AC bus systems.
4	Start pump (DC)	1	May be inoperative if flight is below suction feed altitude. AC power required for engine starting.
5	Valve fuel heater	2	#One may be inoperative provided: (1) Valve failed closed. (2) Flight duration and altitude are such that fuel temperature at engine inlet will not drop below 5 deg. C.
6	Mechanically operated fuel fire shutoff	2	
7	Mechanically operated fuel crossfeed valve	1	
8	Single point fuel system	2	#May be inoperative provided mission requirements can be met by over wing refueling.
9	Indicating system, main tank	2	#One may be inoperative provided: (1) Both engine fuel flow indicating systems are operative. (2) Fuel quantity is checked prior to each takeoff by sticking.
10	Indicating system, center tank	1	#May be inoperative provided both center tank boost pumps are operative, both main tank quantity systems are operative, and if the quantity of fuel in the center tank can be determined by other means.
11	Indicating system, fuselage tanks	2	#One may be inoperative provided both boost pumps are operative, both main tanks and center tank quantity systems are operative, and if the quantity of fuel in the inoperative fuselage tank can be determined by other means.
12	Fuel tank totalizing system	1	#May be inoperative, provided fuel quantity gauges are operative for tanks containing fuel.
13	Fuel used counters	2	#May be inoperative, provided fuel quantity gauges are operative for tanks containing fuel.

**Table 4.9. Hydraulic Power.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Hydraulic system accumulators	2	
2	Hydraulic brake accumulators	4	
3	Accumulator (thrust reverser system)	2	#Both may be inoperative provided no external leakage exists, and associated reverser is stowed and pinned.
4	Accumulator (hydraulic elevator power)	2	
5	Pump assembly, main system (Engine-driven Hydraulic Pump)	2	Right engine driven pump may be inoperative for one time flight for repairs if all other pumps are operative.
6	Pump assembly, hydraulic (electric auxiliary system)	1	
7	Alternate gear motor/pump system	1	
8	Valve, hydraulic priority	2	
9	Valve, hydraulic pressure reducer, spoiler	2	
10	Valve, relief, low pressure reservoir	2	
11	Valve assembly, shutoff, spoiler	2	
12	Valve, two-port, two-position hydraulic system fire shutoff	2	
13	Valve, relief, hydraulic	2	
14	Pressure reducer and relief, hydraulic elevator power valve	1	
15	Relief, return, hydraulic elevator power valve	1	
16	Indicating system, hydraulic pressure	2	
17	Hydraulic Brake Flow Limiter	8	
18	Indicating system, hydraulic brake pressure	2	
19	Annunciator, L and R HYdraulic PRESSure LOW	2	#May be inoperative, provided the hydraulic pressure indicating system is operative.
20	Caution system, REVERSER ACCUMULATOR LOW	2	
21	Caution system, L and R HYdraulic TEMPerature High	2	
22	Fluid quantity indicating system	2	#Both may be inoperative provided each reservoir is checked for proper quantity prior to each takeoff.
23	Engine driven hydraulic pump depressurization valve, low pressure control	2	Either or both low pressure controls may be inoperative provided the high pressure and OFF control are both operative.

**Table 4.10. Ice and Rain Protection.**

**NOTE:** Two operational pneumatic systems are required for flights in icing conditions, except as specifically provided in one of the following items:

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	ENGINE ANTI-ICE ON annunciator	2	#May be inoperative.
2	ENGINE VALVE annunciator	2	May be inoperative provided valves are not actuated from closed position and icing conditions are avoided.
3	Engine anti-ice valves	6	#Any of the anti-ice valves on one engine may be inoperative provided they are in the closed position and the aircraft not operated in icing conditions. All must be operative on the remaining engine.
4	Pitot heater(s)	3	#Either the pilot's or copilot's may be inoperative provided flight is made in day VMC flight conditions with no flight permitted in visible moisture or icing conditions. When the copilot's pitot heater is inoperative, dispatch requirements for affected equipment must be observed ( <a href="#">Table 4.14.</a> , item 3). Auxiliary pitot heater may be inoperative provided: (1) Flight not made in visible moisture or icing conditions. (2) Affected equipment is reviewed. (3) Dispatch requirements for affected equipment are observed. ( <a href="#">Table 4.2.</a> , item 7.) (4) Autopilot is not required for dispatch ( <a href="#">Table 4.2.</a> ).
5	Anti-icing heater ammeter system	1	May be inoperative, provided PITOT/STALL HEATER OFF annunciator system is operative, and all heaters are checked on ground and are determined to be operating prior to each takeoff. Rudder limiter heater need not be checked.
6	Static Port Heaters	4	May be inoperative except when airport temperature is 40°F/5°C or below, and slush or standing water is present on the runway.
7	Angle of attack transducer heater	2	May be inoperative provided flight not made in icing conditions.
8	Ram air temp probe heater	1	See item 7.
9	Rudder limiter pitot heater	1	See item 7.
10	Water service panel heater	1	May be inoperative
11	AIRFOIL ICE protection PRESSURE ABNORMAL indicating system	1	See item 7.
12	Airfoil ICE PROTECTION SUPPLY PRESSURE high indicating system	1	See item 7.
13	ICE PROTECTION TEMPERATURE HIGH	2	See item 7.
14	ICE PROTECTION TEMPERATURE LOW, indicating system	2	See item 7.
15	Annunciator, WING ANTI-ICE ON	1	#May be inoperative provided TAIL DE-ICE ON annunciator is operative or flight not made in icing conditions.
16	Annunciator, TAIL DE-ICE ON	1	#May be inoperative provided flight is not made in icing conditions or WING ANTI-ICE ON annunciator is operative.
17	Ice protection shutoff valve (wing or tail)	2	#May be inoperative if flight is not made in icing conditions and pneumatic crossfeed valves are closed after engine start.
18	Regulator valve	1	See exceptions/remarks in 17 above.
19	Fuselage and wheel well overheat system	1	#May be inoperative provided flight is not made in icing conditions.

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
20	Windshield heat system	3	#May be inoperative provided flight not made in icing conditions. See flight manual for speed and altitude restrictions for cracked or uncracked configurations. Ensure anti-fog system is operational.
21	Windshield wiper system	2	May be inoperative provided flight is not made in precipitation within 5 NM of the airport of takeoff or intended landing.
22	Liquid rain repellent system	2	May be inoperative on both sides.
23	De-fog system	2	May be inoperative.
24	Tail de-ice timer	1	May be inoperative if flight is not made in icing conditions or provided system can be operated manually.
25	Windshield over temp indicating detector	1	May be inoperative. Follow procedures in flight manual.

**Table 4.11. Flight/Voice Recorders.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Flight data recorder system	1	
2	Voice recorder system	1	

**Table 4.12. Landing Gear.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Parking brake	1	#In the event of malfunctions or failure of parking brake, the brake pedals must be monitored or the airplane chocked. Brakes must be applied during engine start.
2	Dual hydraulic power brake control valve	2	
3	Selector valve, hydraulic brake system	2	
4	Anti-skid system (including annunciator light)	1	May be inoperative for one time flight. See flight performance manual for additives involved for takeoff and landing.
5	Position and warning system	1	
6	Brake temperature system	4	One may be inoperative on each side. Visually check brakes prior to takeoff.
7	Parking brake caution (if installed)	1	May be inoperative.

**Table 4.13. Lights.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Cockpit and instrument lighting system	-	#Lights sufficient to clearly illuminate all instruments and controls must be provided.
2	Cabin interior illumination	-	Lighting must be sufficient for cabin attendants to perform their duties.
3	Cargo compartment light system	-	May be inoperative.
4	Passenger notice system (fasten seat belt - no smoking)	1	#System may be inoperative provided: (1) Satisfactory procedures are established and used which include alerting the cabin attendants and notifying the passengers and attendants by use of public address systems when seat belts should be fastened and when smoking is prohibited. (2) The PA system is operative and can be clearly heard throughout the cabin during the flight.
5	Anti-collision lights (standard [red]/strobe [white])	2	Both standard anti-collision lights may be inoperative if strobes are operational. Strobe lights may be inoperative if standard anti-collision lights are operational. See AFI 11-202V3 for additional information.
6	Wing and Nacelle illumination lights	2	May be inoperative provided aircraft is not operated in known or forecast icing conditions at night.
7	Landing lights (wing and nose gear)	4	One required for day operations. For night operations, either wing lights or both nose lights must be operative.
8	Position lights (wing tips - green and red)	4	One lamp must be operative at each position.
9	Aft position light (wing tips - white)	4	One lamp must be operative at each position.
10	Passenger emergency lighting system	1	
11	MASTER WARNING light	2	One may be inoperative.
12	MASTER CAUTION light	2	One may be inoperative.
13	Door warning lights system (except main cabin cargo door)	9	#Door warning lights may be inoperative, provided it is determined by visual inspection that the door(s) is (are) closed and locked.
14	Main cabin CARGO DOOR warning light system	1	
15	Cabin standby lighting system	1	
16	EMERGENCY LIGHT NOT ARMED annunciator	1	May be inoperative provided it is determined the circuit is, in fact, armed.
17	Nose wheel position inspection light	1	Required for night operation.
18	Main gear wheel position inspection lights	2	Required for night operation.

**Table 4.14. Flight Instrumentation/Navigation Equipment.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Central air data computer	2	See table A1-2, item 7.
2	Mach/airspeed indicator (IAS)	2	#Both mach portion of the indicators may be inoperative, provided the aircraft is operated at FL250 or below. If one mach indicator is inoperative, the pilot flying the aircraft above FL250 must have the operative indicator.
3	Mach/airspeed overspeed warning system	1	May be inoperative provided both mach meters are operative and the following speed limitations are observed. Mmo = .79 mach above 25,300 feet. Vmo = 325 knots IAS below 25,300 feet.
4	Altimeter	2	
5	Altimeter vibrator	2	Not required for electrical mode.
6	Rate-of-climb indicator	2	Two TVSI, required, if installed
7	Ram air temperature indicator	1	
8	Horizon indicators	2	#Two independently slaved gyro horizon indicators are required for night and IMC flight conditions. Standby ADI does not fulfill this requirement.
9	Standby Attitude Indicator	1	#Required during operations at night or in IMC.
10	Vertical gyros	2	See horizon indicators.
11	Turn and bank (slip) indicator	4	Pilot's indicator powered by emergency power must be operative.
12	Gyrosyn compass system	2	#One directional gyro may be inoperative for VMC flight conditions provided compass heading indication is available on each pilot's instrument panel. <b>NOTE:</b> Flight data recorder requirements must be considered if applicable.
13	Magnetic compass	1	#May be inoperative provided both directional gyro compass systems are operative. The airplane may continue the flight, or series of flights, but may not depart an airport where repairs or replacements can be made. Must be operative for extended overwater legs.
14	Flight director system	2	Not required unless minimums are predicated on its use.
15	Distance measuring equipment	2	May be inoperative.
16	Marker beacon	1	Required for CAT II operations.
17	Weather radar	1	The airplane may continue the flight or series of flights, provided thunderstorm activity does not exceed "scattered" and can be visually circumnavigated.
18	Radio compass (ADF)	2	As mission requires.
19	VHF navigation receiver (VOR)	2	See item 18.
20	TACAN (if installed)	1	See item 18.
21	ATC transponder	1	As required by FLIP Publications.
22	Radio altimeter	1	Required for CAT II operations. May require deactivation of the GPWS.
23	Supplementary stall recognition system	2	
	A. Computers	2	A. One may be inoperative. Applicable CMPTR circuit breaker must be open.
	B. Stall warning stick shaker	2	B. One may be inoperative.
	C. Horns and lights	2	C. Either one horn or one light may be inoperative.
	D. Stall indication failure	1	D. May be inoperative.

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
24	Instrument warning, monitor or comparator system (does not include power failure warning)	-	May be inoperative. Required for CAT II ILS operation.
25	Speed command warning	2	Not required, provided the failure warning annunciator is operative.
26	Speed Command System	2	Not required provided takeoff, go-around, and initial climb are accomplished in the gyro mode of the flight director. Instrument warning annunciator may be deactivated for night operation provided the speed command warning flags are operational. Two operational speed command systems are required for CAT II ILS operations.
27	Inertial Navigation System (INS)	2*	If installed, the INS should be operational for all passenger carrying flights. Minimum 1 INU is required for flight on CAT I routes and overwater flights. * All non-FMS modified C-9 aircraft are wired for dual INS. Actual installation depends upon unit of assignment. Comply with <b>Chapter 6</b> requirements and FLIP.
28	Altitude Alerting System	1	Not required.
29	Ground Proximity Warning System (GPWS)	1	Mandatory when passengers are carried.
30	TCAS	1	
31	Flight Management System (FMS)		
31A	Control Display Unit (CDU)	2	
31B	Bus-Subsystem Interface Unit (BSIU)	2	Both required for home station departure, one required if failure occurs enroute
31C	Data Loader	1	Not required.
31D	GPS Receiver Processor Unit (RPU)	2	One required for flight
31E	GPS Antenna	2	One required for flight
32	EHSI	2	Both required for departure.

**Table 4.15. Oxygen.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Crew oxygen system	1	As required, see AFI 11-202V3
2	Patient/passengers system	1	As required, see AFI 11-202V3

**Table 4.16. Pneumatic.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
Two fully operational pneumatic systems required for flight in icing conditions, except as specifically provided in one of the following items:			
1	Pneumatic pressure indicating system	1	#Not required if external air cart is used for engine starting.
2	Pneumatic (pilot) pressure regulator, air conditioning system	2	One may be inoperative provided the associated system is operated in HP BLD OFF.
3	Ice protection temperature control system	2	Required if airfoil anti-icing system is used.
4	Augmentation valve	2	#One may be inoperative closed, provided: (1) Flight not made in icing conditions. (2) Pneumatic crossfeeds are closed after each engine start. (3) Air conditioning is operated in HP BLD OFF.

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
5	Eighth stage pneumatic check valve	2	#One may be inoperative, provided: (1) Valve has not failed in open position. (2) Flight altitude limited to FL250 or below. (3) Pneumatic crossfeed valve secured in closed position. (4) Affected air conditioning switch off. (5) Flight avoids icing conditions.
6	Ground connection and check pneumatic valve	1	#Valve may fail in open position, provided: (1) Flight not made in icing conditions. (2) APU bleed air control not open. (3) Ground pneumatic power must be used for engine start. (4) Both pneumatic crossfeed valves secured closed after engine start.
7	Pneumatic cross feed valve	2	#One may be inoperative provided: (1) Flight not made in icing conditions. (2) Valve secured in closed position.

**Table 4.17. Auxiliary Power Unit.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Auxiliary power unit (APU)	1	#May be inoperative provided mission not predicated on its use.
2	APU Annunciator light system (includes FIRE, OIL TEMPERATURE HIGH, and OIL PRESSURE LOW)	1	#Required for APU operation.
3	APU fire shutoff (flight deck)	1	#Required for APU operation.
4	APU fire shutoff (exterior)	1	May be inoperative provided cockpit APU fire shutoff is operative and monitored during APU operation.
5	APU exhaust gas temperature indicating system	1	#Required for APU operation.
6	APU pneumatic check valve	1	#Valve may fail in open position provided: (1) Flight not made in known or forecast icing conditions. (2) APU air must be used for engine start. (3) Both pneumatic crossfeed valves secured closed after engine start.
7	APU tachometer system	1	#Required for APU operation.
8	APU bleed load control valve	1	#May be inoperative provided valve is secured in closed position and bleed air control switch is not open or opened.
9	APU air inlet door actuator	1	#May be inoperative provided the non-ram door is secured in the full open position for APU operation or both ram and non-ram doors secured in the full closed position when APU is not to be operated.

**Table 4.18. Windows.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Windshields	3	Outer pane may be cracked provided: (1) Flight is not made in known or forecast icing. (2) Windshield Heat is turned off. (3) Inner pane not cracked. Inner pane may be cracked provided: (1) Defog function disabled. (2) Outer pane not cracked. <i>Note:</i> Cracks/delaminations are acceptable on all windows provided vision is acceptable as determined by the flight crew before each flight.

**Table 4.19. Engine Fuel and Control.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Fuel flow rate indicating system	2	#One may be inoperative provided N1, N2, EPR and main tank fuel quantity indicating system are operating for affected engine.
2	Fuel Used Indicators	2	#Both may be inoperative provided fuel quantity indicators are operative on all tanks containing fuel.
3	Fuel temperature indicating system	2	#Both may be inoperative provided ram air temperature system is operative and associated FUEL HEAT ON annunciator system is operative.
4	Annunciator, INLET FUEL PRESSURE LOW	2	One may be inoperative, if boost pump operation (both pumps) is verified prior to flight by opening the fuel crossfeed and observing the operational inlet fuel pressure low light is out.
5	FUEL FILTER PRESSURE DROP caution system	2	One may be inoperative provided: (1) Malfunction is in the caution system. (2) The related engine fuel heat system is operating normally. (3) Fuel temperature gauge for affected engine is operating.
6	FUEL HEATER ON caution system	2	Not required if item 3 is operative.
7	Fuel heater interval timer	2	#Both may be inoperative, provided heater manual control is operative.

**Table 4.20. Ignition.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Ignition system, continuous 4 Joule AC	2	#May be inoperative.
2	Ignition system, high energy 20 Joule	2	

**Table 4.21. Engine Indicating.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Engine pressure ratio (EPR) indicating system	2	
2	Exhaust gas temperature (EGT) indicating system	2	
3	N <sub>1</sub> tachometer indicating system	2	#One may be inoperative provided N2, EPR, and fuel flow indicating systems are operative for affected engine.
4	N <sub>2</sub> tachometer indicating system	2	#One may be inoperative provided N1, EPR, and fuel flow indicating systems are operative for affected engine.

**Table 4.22. Thrust Reversers.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Thrust reverser system	2	Both may be inoperative provided the inoperative system(s) is(are) deactivated (pinned closed).
2	Engine reverse unlock light indicating system	2	Both may be inoperative provided reversers are checked for proper stow in the retracted position.
3	Engine reverse thrust light indicating system	2	Both may be inoperative provided interlock system is operative on affected engine(s).

**Table 4.23. Oil.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Indicating system, engine oil pressure (gauge)	2	
2	Annunciator, engine OIL PRESSURE LOW	2	One may be inoperative provided the respective oil pressure, temperature, and quantity gauge are operative.
3	Quantity indicating system, engine oil	2	One or both may be inoperative provided oil quantity is checked (visual or dip stick check) prior to each takeoff and the oil pressure, oil temperature indicating, and oil pressure caution systems are operative.
4	Indicating system, engine oil temperature	2	
5	Caution system, engine OIL STRAINER CLOGGING	2	#One may be malfunctioning provided: (1) It is determined the malfunction is in the caution system. (2) The main oil filter (screen) must be checked and found clean prior to the first takeoff of the day and then every 5 flight hours thereafter.

**Table 4.24. Start Valves.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Caution system, L & R START VALVE OPEN	2	#May be inoperative provided it is determined the affected valve is closed after starting.

**Table 4.25. Wings.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Small lower doors at aileron	6	Group 1, see note in <a href="#">Table 4.3</a> .
2	Flap hinge fairings	8	<p>One or both fairings from one hinge may be missing provided that, if the forward fairing is missing, the aft fairing on the same hinge is removed. Performance limited weights obtained from the flight publication must be reduced by:</p> <p>Max recommended takeoff weight.....1,200 lbs  Obstacle limited takeoff weight.....1,200 lbs  Approach climb limited weight.....600 lbs</p> <p>For takeoff at the reduced weight, use the takeoff speeds determined at the takeoff weight prior to weight reduction. For all other conditions, use the speeds determined at the actual weights.</p> <p>To maintain the same driftdown path for obstacle clearance, reduce the weight by 4,000 lbs. Cruise altitude capability will need to be rechecked.</p>
3	Leading edge slat track cutout doors	20	<p>Up to five per side may be missing.</p> <p>Performance limited weights obtained from the flight publication must be reduced by:</p> <p>Max recommended takeoff weight.....300 lbs/door  Obstacle limited takeoff weight.....300 lbs/door  Approach climb limited weight.....300 lbs/door</p> <p>Per takeoff at the reduced weight, use the takeoff speeds determined at the takeoff weight prior to weight reduction. For all other conditions, use the speeds determined at the actual weights.</p>
4	Bent up trailing edge (BUTE) inboard aft articulated section (approx. 40 inches long each, outboard of main landing gear).	2	One or both may be missing. Reduce all performance limited weights obtained from the flight manual by 200 pounds for each missing BUTE.

**Table 4.26. Nacelle/Pylons.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Pylon trailing edge	2	Group 1, see note <a href="#">Table 4.27</a> .

**Table 4.27. Fuselage.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	External power receptacle	1	Group 1 - see note below.
2	Aft waste water service door	1	Group 1 - see note below.
3	Forward waste water service door	1	Group 1 - see note below.
4	Fresh water service door	1	Group 1 - see note below.
5	Conditioned air ground connect door	1	Group 1 - see note below. If missing, then both packs and both check valves must be operative.)
<b>NOTE:</b> No more than a total of three parts of the items listed as group 1 may be missing for takeoff.			

**Table 4.28. Landing Gear.**

ITEM	A EQUIPMENT	B NO.	C EXCEPTIONS/REMARKS
1	Two-piece outboard (small) main gear door	2	<p>One complete door may be missing. If articulated portion only is missing, then the fixed portion must also be removed.</p> <p>Vmo/Mmo must be limited to 250 KIAS.</p> <p>Performance limited weights obtained from the flight performance manual must be reduced by:  - Max recommended takeoff Gross weight.....250 lbs  - Obstacle limited takeoff weight.....250 lbs  -Approach climb limited weight.....130 lbs</p> <p>For takeoff at the reduced weight, use the takeoff speeds determined at the takeoff weight prior to weight reduction. For all other conditions, use the speeds determined at the actual weights.</p> <p>To maintain the same driftdown path for obstacle clearance, reduce the weight by 900 pounds. Cruise altitude capability will need to be rechecked.</p>
2	Main landing gear spray deflector	2	The airplane may not operate in standing water or slush, with either one or both MLG spray deflectors missing.
3	Main landing gear shimmy damper	2	The shimmy damper reservoir on each MLG may be missing provided the damper is topped with fluid and sealed before each flight.
4	Nose wheel spray deflector (if installed)	1	Deflector skirts may be removed, provided they are removed from both sides. If deflector skirts are removed, chine tires must be installed for operation in standing water or slush.

## Chapter 5

### OPERATIONAL PROCEDURES

**5.1. Checklists.** 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. Notes amplifying checklist procedures or limitations may be added to the checklists (in pencil).

5.1.1. Checklist Inserts. Units may supplement T.O. guidance with MAJCOM/DOV approved checklist inserts according to AFI 11-215, *Flight Manual Program (FMP)*, and MAJCOM supplement. Place inserts at the end of the appropriate checklist or in an in-flight guide. All checklist inserts must have a POC. If any crewmember has recommendations or changes they should contact the POC. The POC will consolidate inputs and submit change according to paragraph 1.7. Local in-flight guides and inserts not affecting T.O. guidance and procedures may be locally developed and OGV approved.

**5.2. Duty Station.** A qualified pilot will be in control of the aircraft at all times during flight. **EXCEPTION:** Unqualified pilots undergoing qualification training and senior staff members who have completed the Senior Staff Familiarization Course. All crewmembers will be at their duty stations during critical phases of flight including takeoffs, approaches, and landings. During other phases of flight, crewmembers may leave their duty station to meet physiological needs and to perform normal crew duties.

**5.3. Flight Station Entry.** Passengers and observers will not be permitted access to the pilot or copilot position in-flight. Aircraft commanders may authorize passengers or observers access to the flight station during all phases of flight. In all cases, sufficient oxygen sources must be available to meet the requirements of AFI 11-202V3.

**5.4. Takeoff and Landing Policy.** The aircraft commander will occupy either the left or the right seat during all takeoffs and landings. After a thorough analysis of the situation (crew qualification, training records, airfield limitations, weather, and patient/passenger considerations) the aircraft commander will determine who will accomplish the takeoff and landing. Comply with the Airfield Suitability and Restriction Report (ASRR).

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

5.4.2. An experienced aircraft commander, instructor, or evaluator will perform actual Category II ILS approaches from the left seat.

5.4.3. Except for paragraph 5.4.1. and paragraph 5.4.2., instructor and evaluator pilots are not restricted with regard to performing or supervising takeoffs and landings.

5.4.4. Aircraft commanders (MP) with less than 100 C-9A hours in command are considered inexperienced and should only perform takeoffs and landings from the left seat when scheduled as pilot in command. Inexperienced aircraft commanders may not perform actual Category II ILS approaches and landings. Experienced aircraft commanders, instructors, and evaluators may be allowed to perform takeoffs and landings.

5.4.5. Flight-qualified pilots (FP) may not perform takeoffs and landings in either seat under the supervision of an aircraft commander unless the aircraft commander is experienced (100 C-9A hours or more in command) and the operations officer has specifically authorized it by annotating the FP's training record, flight orders, or other suitable document.

5.4.6. Copilots (MC) may not perform takeoffs or landings in the left seat unless under the supervision of an instructor or evaluator and no passengers are carried. Copilots will not perform takeoffs or landings in the right seat under the supervision of an aircraft commander unless the MP is experienced in paragraph 5.4.4. In both cases, the operations officer must specifically authorize such operations by annotating the copilot's training record, flight orders, or other suitable document.

## 5.5. Right Seat Procedures.

5.5.1. Normal Procedures. The copilot (right seat) will normally command and activate gear, flap, and slat operation. The pilot (left seat) will acknowledge the command prior to system activation. The copilot will call for the appropriate checklist. The pilot will read the checklist. The copilot will respond to items which require both pilots to reply. Instructor pilots may accomplish their own checklists.

5.5.2. Aborted Takeoffs. When supervising right seat takeoffs and landings, the pilot will assume control of the aircraft during actual aborted takeoffs. The pilot will take control of the throttles after the initial power setting by the copilot, and will immediately take control of the aircraft and execute the abort should one become necessary. If an IP, IP upgrade, or EP is making the takeoff from the right seat, abort responsibilities will be clearly specified in the takeoff briefing.

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

## 5.7. Seat Belts.

5.7.1. All occupants will have a designated seat with a seat belt. Use of seat belts will be as directed by the aircraft commander and the flight manual. When children under the age of two are accepted as passengers, their sponsor must provide their own approved Infant Car Seat (ICS). Passengers may hand-carry infant car seats. These seats will be secured to a seat using the seat belt. Adults will not hold infant seats during any phase of flight.

5.7.1.1. Two people may be seated in the forward ACM seat provided total weight does not exceed 360 pounds.

5.7.2. All crewmembers will have seat belts fastened at all times in-flight, unless crew duties dictate otherwise.

5.7.3. All crewmembers will be seated with seat belts and shoulder harnesses fastened during taxi takeoff, and landing, unless crew duties dictate otherwise. Additionally, anytime the seat belt advisory sign is illuminated, crewmembers will be seated with seat belt fastened, unless crew duties dictate otherwise. Crewmembers performing instructor or flight examiner duties are exempt from seat belt requirements if not occupying a primary crew position; however, a seat with an operable seat belt will be assigned.

**EXCEPTION:** Crewmembers may taxi without the shoulder harnesses fastened for positioning and de-positioning the aircraft.

5.7.4. AECMs need not use a seat belt for takeoff and landing when duties require they be out of their seat for patient care.

5.7.5. When a medical attendant is required to observe patients in the special care area from the ACM seat, a C-9 qualified crewmember should sit with him or her for emergency egress purposes.

**5.8. Aircraft Lighting.** In accordance with AFI 11-202V3, AFI 11-218 (position lights), and applicable T.O.s.

**5.9. Portable Electronic Devices.** In accordance with AFI 11-202V3.

5.9.1. Unauthorized equipment (Walkman type radios/tape players, CD players, etc.) will not be connected to the aircraft intercom, PA, or radio systems.

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

**5.11. Advisory Calls.** Pilots will periodically announce their intentions when flying departures, arrivals, approaches, and when circumstances require deviating from normal procedures. Crewmembers will inform the pilot flying when heading or airspeed deviations are observed, or an altitude variation of 100-feet or more is noticed. Any crewmember seeing a potential traffic, terrain, or obstruction problem will immediately advise the aircraft commander.

5.11.1. Mandatory altitude calls for the pilot not flying (PNF) the aircraft:

5.11.1.1. Non-precision Approaches:

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

5.11.1.1.2. "Minimums" at MDA.

5.11.1.1.3. "Runway in sight." Call when the runway environment is in sight. Do not call too soon when obstructions to vision such as fog, haze, low clouds, etc., are present.

5.11.1.1.4. "Go-around." Call at missed approach point if the runway environment is not in sight or the aircraft is not in a position for a safe landing.

5.11.1.2. Precision Approaches:

5.11.1.2.1. 100-feet above decision height (DH). Use the radio altimeter for Category II ILS.

5.11.1.2.2. "Land." Call at DH if runway environment is in sight and aircraft is positioned for normal landing.

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

5.11.1.3. Category II ILS:

5.11.1.3.1. "Land" at DH (using radio altimeter) if the following are met:

5.11.1.3.1.1. Landing environment is in sight.

5.11.1.3.1.2. Airspeed is plus or minus 5 knots of computed final approach speed.

5.11.1.3.1.3. Localizer and glideslope are within one-half dot deviation on course deviation indicator (CDI) and glideslope indicator (GSI).

5.11.1.3.1.4. The aircraft is in, and tracking to remain within, the lateral confines of the runway, extended.

5.11.1.3.2. “Go-around” at DH (using radio altimeter) if any tolerances above are exceeded or if the aircraft is not stabilized with reference to glideslope, localizer, altitude, or airspeed. This call requires a mandatory go-around by the pilot flying the aircraft.

5.11.1.4. Climb Out:

5.11.1.4.1. Transition altitude

5.11.1.4.2. 1,000-feet below assigned altitude

5.11.1.5. Descent:

5.11.1.5.1. Transition level

5.11.1.5.2. 1,000-feet above assigned altitude

5.11.1.5.3. 1,000-feet above initial approach fix altitude or holding altitude

5.11.1.5.4. 100-feet above procedure turn and final approach fix altitude

5.11.2. During Takeoff. If a condition arises before GO speed is reached, which would make takeoff unsafe, the pilot observing the condition will state “ABORT” and takeoff will be discontinued, unless the AC determines it is not safe to do so.

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

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

5.12.2. Aircraft Interphone:

5.12.2.1. Crew members will advise the aircraft commander prior to checking off interphone.

5.12.3. Command Radios:

5.12.3.1. The pilot not flying the aircraft normally makes all ATC radio calls.

5.12.3.2. In terminal areas the pilot and copilot will monitor the command radio unless directed otherwise. The copilot or other designated crewmember should monitor C2 frequencies (if applicable) on the inbound and outbound leg, unless otherwise directed.

5.12.3.3. The pilot operating the command radios will inform the crew when the primary radio is changed.

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

5.12.3.5. Both pilots will monitor UHF guard (or VHF guard when appropriate) emergency frequency regardless of primary radio.

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

5.12.4.1. "Time Out" is the common assertive statement for use by all crewmembers. The use of "Time Out" will:

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

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

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

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

5.12.4.2.1. Safety permitting, stabilize the aircraft.

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

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

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

**NOTE:** The aircraft commander is the final decision authority.

**5.13. Transportation of Pets.** Transporting pets (dogs and cats) on aircraft operated by or under the control of AMC in conjunction with the sponsor's permanent change of station (PCS) is authorized. Other pets or animals are normally prohibited, but may be moved according to DoD 4515.13R.

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

### **5.15. Runway, Taxiway, and Airfield Requirements.**

#### 5.15.1. Runway Requirements.

5.15.1.1. Minimum Runway for Takeoff. 5,000-feet. When mission requirements justify the increased risk, the OG/CC may authorize operations from a runway with less than 5,000-feet, but in no case will runway length be less than critical field length. Minimum runway width is 90-feet (28 meters).

5.15.1.2. If approach end overruns are available and stressed or authorized for normal operations, they may be used to increase the runway available for takeoff. Departure end overruns (if stressed and authorized) may also be used for landing if needed.

5.15.1.3. Operations into/out of runways with less than 5,500-feet available when the RCR is less than 12 requires a waiver from the OG/CC.

#### 5.15.2. Runway Condition Reading (RCR) Limitations.

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

5.15.2.2. Do not use runways with a reported RCR lower than the lowest RCR correction in the flight publication. For airports which report an RCR for different segments of the runway, consecutive usable segments must exceed critical field length or landing distance by 2,000-feet for restricted operations on those portions. Usable segments must be identifiable by runway markings or airfield familiarity.

5.15.2.3. During operations on runways partially covered with snow or ice, takeoff computations will be based on the reported RSC or RCR for the cleared portion of the runway. A minimum of 25-feet either side of centerline should be cleared to ensure proper takeoff performance in the event of an engine failure. If 25-feet either side of centerline is not cleared to the reported RSC, then the RSC of the uncleared portion will be used for takeoff data computations.

5.15.3. Intersection Takeoffs. Normally, takeoffs will be initiated from the beginning of the approved usable portion of the runway. The decision to make intersection takeoffs rests solely with the aircraft commander.

5.15.3.1. Intersection takeoffs may be accomplished provided the operating environment (i.e., gross weight, obstructions, climb criteria, weather, etc.) will allow a safe takeoff and departure.

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

5.15.4. Wind Limitations. Airfields will be considered below minimums for takeoff and landing on a dry runway when winds, including gusts, are greater than 50 knots from any direction. Maximum crosswind component for a dry runway is 30 knots. Use [Table 5.1](#) for maximum crosswinds for lesser RCR values. Maximum crosswind for an actual Category II ILS is 10 knots. Maximum tailwind component for all operations is 10 knots.

**Table 5.1. Crosswind Limitations.**

<b>RCR Value</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12 &amp; above</b>
<b>Max Xwind Component</b>	<b>5</b>	<b>7</b>	<b>10</b>	<b>12</b>	<b>15</b>	<b>17</b>	<b>20</b>	<b>22</b>	<b>30</b>

5.15.5. Minimum Runway for Landing. 5,000-feet. When mission requirements justify the increased risk, the OG/CC may authorize operations into runways with less than 5,000-feet, but in no case will operations be conducted into runways whose length is less than the landing distance from 50-feet over the threshold, as derived in TO 1C-9A-1-1. Minimum runway width is 90-feet (28 meters).

5.15.5.1. Compute landing distance with no reverse thrust.

5.15.5.2. Operations into airfields with 5,500-feet or less of runway will be limited to daytime operations unless glidepath guidance is available (PAR, ILS, VASI or PAPI).

5.15.5.3. Threshold crossing height should be 50-feet or as published for precision instrument approaches, unless in the aircraft commander's opinion, conditions (short runway, reduced RCR, etc.) exist which warrant modification of the approach and flare to ensure touchdown within the first 1,000-feet of the runway.

5.15.6. Taxiway Requirements.

5.15.6.1. Minimum taxiway width is 40-feet (14 meters). A 90 degree turn onto or turn off a 40 foot taxiway will be from and to a minimum surface width of 75-feet.

5.15.6.2. Arresting Cables. See C-9A Flight Manual, Section two.

5.15.7. Airfield Suitability and Restriction Report (ASRR). Aircrews and planning agencies will contact HQ AMC/DOVS for all questions pertaining to airfield weight bearing capability and will review the ASRR prior to all off-station operations. Crews that have access to the Worldwide Web will review airfield suitability in the airfield database vice the ASRR. The airfield manager is the authority for weight bearing waivers. Waivers must be obtained prior to mission execution.

5.15.7.1. HQ AMC/DOVS is waiver authority for AMC and AMC-gained aircraft (except the AMC/DO is waiver authority for Guantanamo Bay, Cuba certification requirements). Waiver authority for other aircraft is the assigned MAJCOM. Once a mission is in execution, the aircraft commander is responsible for determining airfield suitability based upon operational need. See the ASRR for airfield certification requirements.

5.15.8. Aircraft Classification Number (ACN) and Pavement Classification Number (PCN).

5.15.8.1. An aircraft having an ACN equal to or less than an airfield's PCN can operate without weight restriction. The last two letters of a PCN code (tire pressure and calculation method) are not restrictive for C-9 operations. Consult the flight information handbook for ACNs. Consult the FLIP and Jeppesen airport directory for PCNs.

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

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

**EXCEPTION:** According to AFI 11-218, *Aircraft Operation and Movement on the Ground*, aircraft may taxi without marshals/wing walkers at home station along locally established taxi lines which have been measured to ensure a minimum of 10-feet clearance from any obstruction.

5.16.2. When taxi clearance is doubtful, use one or more wing walkers. If wing walkers are unavailable, deplane one or more crewmembers to maintain obstruction clearance and provide marshaling. Use AFI 11-218 prescribed signals. The aircraft commander should use marshaller and wing walkers, or deplane crewmembers to act as an observer while maneuvering on narrow taxiways. During night taxi operations, marshaller will have an illuminated wand in each hand. Observers should be in a position to see wing walkers at all times (through door or windows) and communicate to the pilot.

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

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

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

5.16.3.3. Minimize power settings during all taxi operations.

5.16.3.4. Avoid (when possible) taxi operations which would position an engine over an unswept surface. If it becomes absolutely necessary to position an engine over an unswept surface, the

engine should be left in idle (to the maximum extent possible) until the engine is back over a clean surface.

**5.17. Fuel Planning.** See AFI 11-202V3 and the following: Plan fuel load using computer flight plan or AF Form 70 or AF Form 4053 (fuel plan not required on local training missions remaining within 200 NM). Use the aircraft performance manual, TO 1C-9A-1-1, for fuel planning and in-flight operations.

5.17.1. Required Ramp Fuel Load (RRFL) will consist of all fuel required for engine start, taxi, APU operation, takeoff, climb, cruise, alternate/missed approach (if required), descent, approach, transition, landing, and fuel reserve.

5.17.1.1. Block-to-Block. Use the 0.78M flight planning chart for normal mission requirements. Urgent and alert missions should be planned using 0.80M charts.

5.17.2. Alternate fuel. Fuel for flight from intended destination to alternate aerodrome at optimum altitude and long range cruise speed. Compute fuel, time, and altitude from T.O. 1C-9A-1-1, section eight.

5.17.2.1. When two alternates are required, use fuel required to the furthest alternate.

5.17.2.2. When an alternate is required and the destination forecast ceiling and visibility values are equal to or above the lowest authorized ceiling and visibility minimums for the planned operational approach, use the reserve fuel obtained from TO 1-C-9A-1-1, Figure A8-7, Reserve Fuel From 10,000-feet, or Figure A8-6, Reserve Fuel From Sea Level.

5.17.2.3. When the destination forecast is below landing minimums or the forecast ceiling is less than the value depicted for the planned approach, use the reserve fuel obtained from TO 1-C-9A-1-1, Figure A8-6, Reserve Fuel from Sea Level.

5.17.2.4. When holding is required in lieu of an alternate at a remote or island destination, compute holding for 1 + 15 hours using planned destination gross weight at FL 200. Use the holding chart A8-5, Reserve Fuel - Hold Over destination, in T.O. 1C-9A-1-1. 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 criteria listed in [Chapter 6](#).

5.17.3. Fuel reserve. Minimum landing fuel for flight planning purposes is 4,000 pounds.

5.17.3.1. Category I Fuel Reserve. Add 10 percent of fuel required to fly the Category I route or route segment.

5.17.3.2. Extra Fuel. Do not carry fuel exceeding RRFL for convenience. Unidentified extra fuel should not exceed 3,000 pounds. Identified extra fuel may be added:

5.17.3.2.1. When off-course maneuvering is anticipated.

5.17.3.2.2. To offset increased fuel consumption due to icing.

5.17.3.2.3. When destination NAVAIDs or terminal weather forecasts are unreliable or insufficient.

5.17.3.2.4. For known or anticipated holding delays.

5.17.3.2.5. 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 would delay or be detrimental to mission accomplishment.

**5.18. Category I Route Navigation and Fuel Planning Procedures.** The following procedures will be used by C-9A aircraft conducting operations along Category I routes.

#### 5.18.1. Before Taxi.

5.18.1.1. Plot the CAT I portion of the flight on an appropriate chart (e.g., OPC, GNC, Jeppesen). Local unit may determine a standard plotting chart in **Chapter 10**. Plot each planned waypoint, and connect them along the planned route of flight using a solid line. Annotate the chart with mission number, aircraft commander's name, and date.

5.18.1.2. Time permitting, during ground operations prior to CAT I legs, the INSs will be turned off and realigned.

5.18.1.3. All loading of the INSs will be accomplished utilizing a "two pilot concept"; loading is a coordinated operation by two people working in sequence independently. When loading present position, one pilot will insert the present position, then the other pilot will verify independently that the correct present position has been loaded.

5.18.1.4. The INS waypoints will be loaded prior to departure, also using the two pilot concept. Loading should be from a single master document such as a Computer Flight Plan (CFP). Load INS waypoints in the following manner:

5.18.1.4.1. One pilot will load the waypoints and place the waypoint number next to the coordinates on the CFP.

5.18.1.4.2. Another pilot will verify each waypoint by checking the coordinates. Additionally, use the WAYPOINT CHANGE function to check the track and distance data matches that shown on the CFP.

5.18.1.4.3. When these checks have been accomplished, place a circle around each waypoint number on the CFP.

5.18.1.5. Significant points such as ETP and possible divert bases, should be loaded as INS TACAN waypoints for ready reference in flight.

5.18.1.6. During the Before Taxi checklist, the INS MSUs should be placed in "NAV", not "ALIGN", to preclude automatic shutdown in the event of an overheat.

#### 5.18.2. In-flight.

5.18.2.1. Use all available navigational aids to monitor INS performance. Immediately report malfunctions or any loss of navigation capability which degrade centerline accuracy to the controlling ARTCC. Use the following procedures for flight progress:

5.18.2.1.1. When possible, obtain a coast out fix prior to, or immediately upon entering, the Category I Route/overwater segment. Perform a gross error check using available NAVAIDs and annotate the position and time on the chart.

5.18.2.1.2. When approaching each waypoint, recheck the coordinates for the next waypoint.

5.18.2.1.3. Approximately ten minutes after passing each waypoint, hold the present position of each INS; record the latitude/longitude indicated on each INS (and GPS as applicable) and plot the position and time on the chart. Ensure compliance with course and ETA tolerances.

5.18.2.1.4. If a revised clearance is received, record and plot the new route of flight on the chart, using a dashed line.

5.18.2.1.5. Upon return to home station, turn in the charts and applicable computer flight plans to squadron Stan/Eval. Squadrons will retain the charts, CFPs, and associated materials for a minimum of 3-months.

5.18.3. Abnormal Procedures. Refer to appropriate FLIP documents for latest abnormal/emergency procedures.

5.18.3.1. North Atlantic Minimum Navigation Performance Specifications (MNPS) Airspace and NORTH PAC Procedures:

5.18.3.1.1. Minimum navigation performance specification standards (FLIP AP/2) are mandatory.

5.18.3.1.2. Aircraft losing one or more INS prior to airspace entry will return to the nearest maintenance facility.

5.18.3.1.3. Inoperative Inertial Navigation Units. Once established in the route structure:

5.18.3.1.3.1. One unit inoperative:

5.18.3.1.3.1.1. Advise ARTCC unless within range of normal radio aids.

5.18.3.1.3.1.2. Plot position on navigation chart every 30 minutes.

5.18.3.1.3.1.3. Check the accuracy of the remaining INS, using all available NAVAIDS (VOR/DME, GPS, radar, HF DF fix, etc.)

5.18.3.1.3.2. Two units inoperative:

5.18.3.1.3.2.1. Advise ARTCC.

5.18.3.1.3.2.2. Verify last recorded position on chart.

5.18.3.1.3.2.3. Make turns on time using DR headings from computer flight plan.

5.18.3.1.3.2.4. Use ADF, VOR/DME, GPS, and radar to update the DR positions.

5.18.3.1.3.2.5. Attempt to obtain an HF DF fix through regular ARTCC frequencies.

5.18.3.1.3.2.6. Contact aircraft in close proximity to determine winds/drift aloft to update CFP.

5.18.3.1.3.3. Differences Between INSs.

5.18.3.1.3.3.1. Use all available NAVAIDS to determine which INS is accurate. Additionally, check groundspeed readouts on both INSs. A malfunctioning INS may display an erroneous groundspeed.

5.18.3.1.4. If able to establish which INS is accurate, use it for navigation and comply with one unit inoperative procedures above. If unable to determine which unit is faulty, proceed as follows:

5.18.3.1.4.1. Plot both positions every 30-minutes.

5.18.3.1.4.2. Continuously check position using available NAVAIDS.

5.18.3.1.4.3. Attempt to establish which INS is most accurate. If unable to determine which set is in error, split the difference.

5.18.3.1.4.4. If divergence has been gradual, it should have been determined which INS is accurate; follow one unit inoperative procedures.

5.18.3.1.4.4.1. If unable to determine which INS unit is in error, follow two units' inoperative procedure above.

5.18.4. Equal Time Points (ETPs).

5.18.4.1. Whenever Extended Range Operations are conducted (see paragraph 5.26.) computation of an Equal Time Point (ETP) is required. Annotate the ETP along the planned route of flight on the OPC/GNC.

5.18.4.2. Compute ETPs according to the following formula:

FL100 ETP (NM) =  $\frac{D \times GSR}{GSR + GSC}$ , where:

D is the distance in nautical miles between the destination field and recovery field

**NOTE:** The recovery field is not necessarily the departure field.

GSR -- Average Ground Speed to Recovery Field ñ This is the average ground speed at 10,000-feet from the ETP to the recovery field. To compute ground speed, apply the forecast headwind/tailwind component to the LRC true airspeed.

GSC -- Average Ground Speed to Continue to Destination ñ Is the average ground speed at 10,000-feet from the ETP to the destination.

Example: D = 1040nm; forecast winds at 10,000-feet show a 60 knots headwind to continue, 80 knots tailwind to return; LRC TAS at 10,000-feet is 324 knots at standard day; and 86,000 pounds gross weight (Estimated gross weight is takeoff gross weight minus one-half block-to-block fuel to the recovery field (from T.O. 1C-9A-1-1, figure A8-2, 3 or 4).

ETP =  $\frac{(1040)(404)}{(404 + 264)} = 629$  NM from the recovery base.

**NOTE:** The computation above will yield an ETP based on recovering or continuing at 10,000-feet. This is the most limiting case, and will ensure an accurate ETP in the event of an emergency such as a rapid decompression.

5.18.5. ETP Fuel Planning. To minimize fuel required at the ETP, all fuel is assumed available for use following the emergency descent. Additionally, CAT I fuel from the ETP to the most suitable recovery field is the only fuel reserve planned.

5.18.5.1. Required Ramp Fuel. Total flight planned fuel must be compared to the fuel required to fly to the ETP, experience a malfunction requiring an emergency descent and then fly to a recovery field at 10,000-feet using two engine LRC. If ETP recovery fuel is greater than total flight planned fuel, the additional fuel will be included as identified extra.

**NOTE:** If no passengers are carried, and the crew is comprised of no more than 8 crewmembers, flight may be planned and flown using recovery from the ETP at Single Engine Service Ceiling, instead of 10,000-feet. Annotate appropriate values in item g on **Figure 5.1**.

5.18.5.2. Use example at **Figure 5.1**, to calculate required fuel from appropriate figures in the 1C-9A-1-1. AF Form 4053, **Fuel Planning**, and the form's reverse side (**INS Flight Plan and Log**, may be used for in-flight/mission planning purposes.

Line a. Self explanatory.

Line b. Self explanatory.

Line c. distance = no wind distance (figure A3-3)  $\pm$  (time to climb x cruise wind x .7).

**NOTE:** headwinds will be subtracted, tailwinds added to no wind distance

time = figure A3-2.

fuel = figure A3-4.

Line d. distance = ETP distance - line c. distance.

time = line d. distance / GS (ground speed from Computer Flight Plan or TAS adjusted for winds).

fuel = total FF (fuel flow) x line d. time.

(a.) Use cruise control table IMN .78 to determine FF.

(b). Level off weight = takeoff gross weight - (line b. fuel + line c. fuel).

Line e. Add total of all columns.

Line f. Takeoff gross weight - line e. fuel.

Line g. Use fig A4-30 or A4-61 with line f. weight. Depending on weather, NAVAID status, etc., determine whether to continue to the destination or divert to the planned recovery field.

distance = distance from ETP to either the destination or return field.

fuel = use either a or b below. Add 250 lbs per hour to fuel flow for operating APU.

(a). Continue to destination. Fuel = [(total distance - ETP distance) / GSC] x total fuel flow).

(b). Return. Fuel = (ETP distance / GSR) x total fuel flow.

Line h. 10% of fuel required to recover from the ETP to the destination (or other suitable alternate) field using the criteria described in Line g. above.

Line i. Self explanatory.

Line j. Total of lines e, g, h, and i. If required fuel exceeds planned ramp fuel, add the difference as identified extra to the flight planned fuel plan.

**NOTE: Figure 5.1.** example assumes all fuel will be used, however the emergency descent distance has not been included. Although this may yield slightly less fuel required, DO NOT include this in the planning process.

5.18.5.2.1. Example: Takeoff gross weight is 105,000 lbs. Passengers are being carried, so recovery from the ETP must be accomplished at 10,000 feet. TAS at FL 350, 0.78M, is 448 kts at standard day. Flight level winds are 50 kts headwind to the midpoint, and 75-knots tailwind to return to the departure point. TAS at 10,000-feet is 335-knots at standard day. Winds at 10,000-feet are 60 knots headwind to continue, and 80 kts tailwind to return. Total distance to the destination is 1040 NM. Distance to the ETP is 629 NM. Planned ramp fuel is 21,000 lbs. Should a problem occur at the ETP resulting in a descent to 10,000-feet the decision is to return to the departure (mainland) airfield.

5.18.5.2.2. Solution: Since the required ramp fuel of 22,800 lbs is greater than the planned ramp fuel of 21,000 lbs, add 1,800 lbs as “identified extra” fuel for the purpose of returning to the departure field should an emergency occur at the ETP.

5.18.6. Post Flight. Before removing power to the INSSs, determine the amount each drifted by erasing all updates, entering the aircraft parking location as a waypoint, and using the WAYPOINT CHANGE function to display the distance between present position and the known parking location.

**5.19. Zero Flap Takeoffs.** Missions will not be planned such that a zero flap takeoff is necessary unless approved by the OG/CC. Aircraft commanders have the authority to accomplish zero flap takeoffs during operational missions when mission requirements dictate.

**Figure 5.1. Fuel Planning Example.**

FUEL PLANNING				
OPERATING WEIGHT	AIRCRAFT NUMBER	MSN #	DATE	
CARGO/PAX WEIGHT	HIGHEST ACFT FL	LO TEM DEV	CFP #	REMARKS
RAMP WEIGHT FUEL	TAKEOFF WEIGHT	DEV	WIND VALID	
RAMP WEIGHT	PAGE	TIME	FUEL	
	Distance			
a. Takeoff gross weight = 105,000 lbs				
b. Start, taxi & takeoff			1.2	
c. Climb	152	0.42	3.9	
d. Cruise to ETP at FL 330	477	1.19	6.6	
e. Total Used at ETP	629	1.61	11.7	
f. Midpoint gross weight = 93,300 lbs				
g. Recovery to LERT at 10,000 feet	629	1.52	9.2	
h. CAT I reserve fuel			0.9	
i. Approach and landing <sup>0</sup>		0.3	1.0	
j. Required ramp fuel			22.8	
LOWEST ACFT CONSTANT FL	ENDURANCE		BURNOFF	
TOTAL WIND FACTOR	1 <sup>ST</sup> HALF	2 <sup>ND</sup> HALF	LANDING FUEL	
TOTAL DISTANCE ( ) = T( ) MIN (WF ____ - WF ____ ) + (TAS ____ ( ) 60				
TOTAL TIME -T = TIME TO ETP	SIGNATURE			

**5.20. BASH Programs.** BASH programs are centralized unit efforts that provide information cross-feed, hazard identification, and a consolidated course of action. As a minimum, units must implement the following procedures:

5.20.1. Ensure compliance with the following Bird Watch condition restrictions:

5.20.1.1. **Bird Watch Condition Low-** No operating restrictions.

5.20.1.2. **Bird Watch Condition Moderate-** Initial takeoffs and final landings allowed only when departure and arrival routes will avoid bird activity. Local IFR/VFR traffic pattern activity is prohibited.

5.20.1.3. **Bird Watch Condition Severe-** All takeoffs and landings are prohibited. Waiver authority is local OG/CC or equivalent. Parent MAJCOM/DO waiver is required to operate at airfields not controlled by the MAF.

5.20.2. Make every effort to not schedule takeoffs, landings, and low-levels from one hour before to one hour after sunrise and sunset during the phase II period. In addition, significant bird hazards will be published in FLIP GP and the IFR Supplement along with the associated airfield operating hour restrictions and avoidance instruction.

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

5.20.2.2. All units will have a BASH Reduction Plan in accordance with AFI 91-202/MAJCOM supplement. All tenant units will work with the host base to create a plan.

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

5.20.4. Howard AFB, Panama has singularly distinctive BASH considerations. Ensure crews comply with AFPAM 91-212/MAJCOM supplement.

5.20.5. Enroute. The aircrew should consider bird migratory patterns during enroute portion of the mission to minimize the potential of an in-flight bird strike. The Bird Avoidance Model (BAM) on HQ AFSC/SEF www site: <http://www-afsc.saia.af.mil/AFSC/Bash/home.htm>, provides BASH information including regionalized CONUS bird migration, PFPS software overlay, and latest news. See AFPAM 91-212, *Bird Aircraft Strike Hazard (BASH) Management Techniques*, for additional information.

**5.21. Functional and Acceptance Check Flights (FCF or ACF).** FCFs and ACFs will be performed according to T.O. 1-1-300 and applicable MAJCOM 21-series directives. Additional guidance can be found in T.O.s 00-20-6, 1C-9A-6CF, and 1C-9A-1.

5.21.1. Terms and Abbreviations:

5.21.1.1. FCF--FCFs are performed after accomplishing inspections or maintenance to assure the aircraft is airworthy and capable of mission accomplishment.

5.21.1.2. ACF--ACFs specify guidelines for accepting new production aircraft and to determine compliance with contractual requirements (e.g. C checks).

5.21.2. FCF Restrictions:

5.21.2.1. Conditions requiring an FCF according to T.O. 1C-9A-6CF include (but are not limited to) major retrofit modifications, removal or replacement of moveable flight control surfaces, major repairs that would affect the flying characteristics of the aircraft, adjustment, removal or replacement of major components of the flight control system for which airworthiness cannot be verified by maintenance operational checks, or removal or replacement of any two engines.

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

5.21.2.3. The decision to approve a combined FCF and ferry flight is the responsibility of the NAF/DO.

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

5.21.2.5. FCFs will be accomplished by the best qualified instructor/Stan Eval aircrews which will be designated FCF qualified to their assigned aircrew position by the OG/CC in a letter.

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

5.21.2.7. FCF aborts. If a malfunction occurs during an FCF and is not related to the condition generating the FCF, and the original condition operationally checks good, the aircraft may be released for flight.

5.21.2.8. OG/CC and deployed mission commander may authorized temporary waivers to these FCF procedures for aircrew qualification when operationally necessary. Permanent waivers require MAJCOM approval.

5.21.3. Enroute to PDM Facility. Crews will conduct functional checks on the autopilot, auto throttles, speed command, and stall warning systems enroute to the PDM facility when delivering an aircraft to depot. Report any discrepancies discovered to maintenance technicians upon arrival.

**5.22. Participation in Aerial Events.** Use AFI 11-209, *Air Force Participation in Aerial Events*, and appropriate MAJCOM supplement. Aerial events must be sanctioned and individually approved by the appropriate military authority and dated with the FAA. AFI 11-209 identifies events sanctioned for support and the approving authority for each type of event. In addition, AFI 11-209 stipulates that units participating in aerial events will ensure aerial activities are coordinated with the FAA through the regional Air Force representative.

**5.23. Hand-held GPS.** Carry a Hand-held GPS on every mission except when installed onboard (e.g., FMS-800), including local and off-station training missions **EXCEPTION:** A Hand-held GPS is not required for a local mission without passengers or if the aircraft has an internal GPS). The Hand-held GPS, when operating properly, can provide useful information; however, it must never be used as the primary navigation source. Use of any Hand-held GPS receiver that has not been EMI certified is restricted to operations above 10,000 ft AGL only. Any type of Hand-held GPS may be used unless interference is noted with any aircraft system. The actual use of the Hand-held GPS rests with the aircraft commander. Its usage must never jeopardize safety. When aircrews deploy with or without an aircraft, (stage crews) each crew will deploy with a Hand-held GPS. This would include KLX-100s, PLGRs, Garmins and Magellans.

5.23.1. Before using the Hand-held GPS in-flight, crewmembers must receive training and aircraft must be capable of supporting the Hand-held GPS equipment.

**WARNING:** Electrical problems have been reported on KLX-100 units. It is extremely important to insert all of the batteries in the proper orientation as shown in The KLX-100 Operators' Guide, Section 1.1.2, Figures 1-11 through 1-17. The manufacturer confirms that if only one battery is inserted

incorrectly, the unit will operate for 10-30 minutes. An increase in temperature may be noted followed by a crackling sound as the battery expands and ruptures. Be extremely careful as battery acid may leak from the bottom of the unit. A way to double-check proper insertion is to go to the GPS Setup page and check the bar graph showing battery power. Make sure it reflects battery strength near 100%. If a problem is detected, shut down the GPS immediately and disconnect unit from any external power source. Report the incident through proper channels. Do not attempt to remove the batteries. This action could cause injury to the individual and will impair investigation for warranty claims.

5.23.2. The hand-held GPS will not be used to update navigation equipment (INS) unless the hand-held GPS position can be confirmed by another aircraft source (i.e. radar, TACAN, VOR, or navigator).

**5.24. Powerback.** This procedure may be accomplished when authorized by the OG/CC. Describe in [Chapter 10](#).

**5.25. Engine Running On/Offload Procedures.**

5.25.1. To facilitate patient and passenger loading during operations with an inoperative APU or during contingency operations in hostile environments, personnel may be off-loaded and on-loaded using the main cabin door or litter ramp.

5.25.2. Procedures:

5.25.2.1. Set parking brake.

5.25.2.2. Shutdown left engine.

5.25.2.3. Position right throttle to idle.

5.25.2.4. Deplane a crewmember (normally the crew chief) to monitor enplaning/deplaning of personnel.

5.25.3. Crew changes during local training missions with both engines operating are authorized. Position throttles to idle and enplane/deplane through the main cabin door.

**5.26. Extended Range Operations.** The C-9A is considered to be conducting extended range operations whenever flying on a route containing a point further than 60 minutes flying time from a suitable recovery field at 10,000-feet, single-engine cruise speed, in still air. Comply with ETP and fuel planning requirements of paragraph [5.18.5](#), and oxygen requirements of paragraph [6.25](#) whenever extended range operations are performed.

5.26.1. Ferry Flights. Extended range flights for the purpose of positioning aircraft between theaters (PDM, deployments, etc.) are ferry flights. All pilots tasked to conduct ferry flights must be mission ready in accordance with AFI 11-2C-9V1, *C-9 Aircrew Training*.

5.26.1.1. Aircraft being ferried will ensure proper life support equipment is onboard for the route to be flown (e.g., exposure suits, life rafts, etc.). Additionally, spare logistical equipment (tires, INS, etc.) will be carried to preclude the aircraft's being grounded due to minor maintenance en route.

**5.27. Hearing Protection.** In flight, the noise level in the C-9A main cabin exceeds AFOSH standards. All crewmembers should wear earplugs or headsets when operating in the main cabin. Patients, atten-

dants, and passengers must be offered earplugs and should be highly encouraged to use them. With the cockpit door closed, the pilot and copilot positions marginally meet AFOSH noise standards, while the jumpseat exceeds the standard. Use of earplugs is highly encouraged for all cockpit personnel.

**5.28. Aircraft Recovery from Unprepared Surfaces.** Aircrews will normally not attempt to recover an aircraft after inadvertent entry onto unprepared surfaces not suitable for taxi. Using the appropriate equipment, ground crews will accomplish aircraft recovery. Unless an emergency situation dictates otherwise, aircrews may accomplish recovery only if there is no aircraft damage, the surface will support the aircraft, and the AC has coordinated with appropriate MAJCOM headquarters maintenance authorities.

## Chapter 6

### AIRCREW PROCEDURES

#### *Section 6A—Pre-mission*

##### **6.1. Aircrew Uniform.**

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

6.1.2. Each group commander will determine clothing and equipment to be worn or carried aboard all flights commensurate with mission, climate, terrain involved and paragraph 6.51 of this AFI.

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

6.1.2.2. It is recommended that primary crewmembers wear Nomex gloves during engine start, taxi, takeoff and landing.

6.1.2.3. Crewmembers will remove rings and scarves prior to performing aircrew duties in or around the aircraft.

6.1.3. See AFI 10-403, *Deployment Planning*, for mobility requirements.

##### **6.2. Personal Requirements.**

6.2.1. Passport. Carry a valid passport on all missions outside the 48 conterminous states.

**EXCEPTION:** Unit commanders may authorize newly assigned personnel who have applied for, but not yet received a passport to act as crewmembers on missions not scheduled to transit locations where passports are required. Passports are not required for local training missions.

6.2.2. Shot Record. Ensure immunization requirements are met. Carry shot record on all missions outside the 48 conterminous states. C-9A crewmembers must maintain worldwide shot requirements.

**EXCEPTION:** Shot records are not required for local training missions.

6.2.3. Corrective Lenses. Comply with AFI 11-202V3.

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

6.2.5. Identification Tags. Two required for all flights.

6.2.6. FOD Hazards. Crewmembers will not wear wigs, hair pieces, rings, ornaments, pins, clips, or other hair fasteners in the aircraft or on the flight line.

**EXCEPTION:** Crewmembers may wear plain elastic hair fasteners and/or barrettes. These fasteners must not interfere with the wearing of headsets or the donning of oxygen equipment and will be accounted for before and after flight.

6.2.7. Flashlights. Each crewmember must carry an operable flashlight for night flights according to AFI 11-202V3.

6.2.8. A reflective belt or suitable substitute will be worn on unlit flight lines during hours of darkness or periods of reduced visibility according to AFOSH Standard 127-100, *Aircraft Flight Line - Ground Operations and Activities*.

### 6.3. Pre-mission Actions.

6.3.1. Accomplish Theater Indoctrination Training prior to transiting the following areas:

6.3.1.1. Asia, Pacific, Australia, and Indian Ocean

6.3.1.2. Africa and the Middle East

6.3.1.3. Europe, Baltics, and Russia

6.3.1.4. Caribbean, Central America, and South America

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

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

6.3.2.2. Airspace/Airfield Review. Flip, fir/uir/adiz procedures.

6.3.2.3. Airspace classifications, ASRR, and airport qualification videos (if applicable).

6.3.2.4. Theater Instrument Procedures. Required instruments and/or procedures for Non-DoD Approaches, course reversal approaches, circling, holding, NDB approaches, Host Nation/Jeppesen Approaches, and Altimeter setting procedures.

6.3.2.5. Organized Track Systems. Minimum Navigation Performance Specifications (MNPS) Airspace requirements; North Atlantic and Pacific Region Track Systems.

6.3.2.6. Communication and Emergency Procedures. Command and Control, Over-water position reporting, lost communications procedures, emergency procedures, and weather information sources.

6.3.2.7. Border Clearance. Foreign Clearance Guide, Customs, Immigration, Agriculture, Insect and Pest Control, and Diplomatic Clearances.

6.3.2.8. Flight planning. DD Form 1801, Jeppesen Computer Flight Plan, Jeppesen Approach Plates and Charts, Theater Weather Conditions, Fuel Reserves and Alternate Requirements, Equal Time Points/Critical Wind Factors, and International NOTAMs.

6.3.2.9. Special Military Operations. "Due Regard" considerations.

6.3.2.10. Other Regulatory Requirements. General navigation procedures, Life Support equipment, hazardous cargo, crew rest/crew duty time, aircraft records/AFTO 781 procedures, mission essential ground personnel/additional crewmembers, passenger handling, etc.

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

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

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

6.3.4.1. Review tasking and itinerary.

6.3.4.2. Review applicable OPORD and FLIP.

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

6.3.4.4. Obtain required customs forms.

6.3.4.5. Complete TDY order request forms (if required).

6.3.4.6. Obtain computer flight plans (CFP), as appropriate.

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

6.3.4.8. Review anti-hijacking procedures (see AFI 13-207, *Preventing and Resisting Piracy [Hijacking]*, and **Chapter 7** of this AFI).

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

6.3.4.10. Obtain visas, if required.

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

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

6.3.4.13. Release available seats to passenger terminal.

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

**6.4. Aircrew Publications Requirements.** As a minimum, primary crewmembers will carry the publications in **Table 6.1.** on all missions.

**Table 6.1. Publication Requirements.**

<b>PUBLICATION</b>	<b><u>AC</u></b>	<b><u>CP</u></b>	<b><u>FN</u></b>	<b><u>AET</u></b>	<b><u>FA</u></b>
TO 1C-9A-1, <i>Flight Manual</i>	X				
TO 1C-9A-1-1, <i>Performance Manual</i>	X				
TO 1C-9A-1-3 (Preliminary Flight Manual for FMS-800)	X				
TO-1C-9A-1-2 (Supplement to 1C9A-1-3 (on USAFE Aircraft # 876)	X				
TO 1C-9A-1-CL-1, <i>Pilot's Abbreviated Checklist</i>	X	X			

<b>PUBLICATION</b>	<b><u>AC</u></b>	<b><u>CP</u></b>	<b><u>FN</u></b>	<b><u>AET</u></b>	<b><u>FA</u></b>
AFI 11-202V3, <i>General Flight Rules</i>	X				
AFI 11-2C-9V3, <i>C-9 Operations Procedures</i>	X				
1C-9A-5, <i>Weight and Balance Handbook</i>	<i>(maintained on aircraft)</i>				
TO 1C-9A-1-CL-3, <i>Flight Nurse's Abbreviated Checklist</i>			X		
TO 1C-9A-1-CL-4, <i>AET's Abbreviated Checklist</i>				X	
TO 1C-9A-1-CL-5, <i>Steward's Abbreviated Checklist</i>					X

### **Section 6B—Pre-departure**

**6.5. Airfield Certification.** All crewmembers and staff mission planners will review airport qualification audiovisual slide tape programs as available before operating missions into unfamiliar airfields. In addition, aircrews will review the Airfield Suitability and Restrictions Report (ASRR) and should contact HQ AMC/DOVS for updates to airfield operability and weight bearing capability. Waivers will be in accordance with paragraph 5.15.7. The latest information is available through the World Wide Web or through GDSS/C2IPS.

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

### **6.7. Flight Crew Information File (FCIF) Procedures.**

6.7.1. Review FCIF according to AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, and MAJCOM supplement. For AMC, use Volume 1, (index and safety-of-flight files, as a minimum) before all missions or ground aircrew duties. Update the FCIF currency record with the latest FCIF item number, date, and crewmember's initials or as specified.

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

6.7.3. Crewmembers not assigned or attached to the unit operating a mission will certify FCIF review by entering the last FCIF number and their initials behind their name on the file copy of the flight authorization.

### **6.8. Flight Crew Bulletins (FCB). (As Applicable)**

6.8.1. FCBs are issued under provisions of AFI 11-202V2, *Aircrew Standardization/ Evaluation Program*, and MAJCOM supplement. For AMC, OG/OGV is OPR for FCBs. Items in FCBs may include local procedures and policies concerning equipment and personnel generally not found in any other publications.

6.8.2. All crewmembers should be cognizant of FCB contents.

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

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

\* Indicates mandatory for all missions away from home station.

6.10.1. Publications:

6.10.1.1. \*AFI 11-401, *Flight Management*

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

6.10.1.3. \*Airfield Suitability and Restrictions Report (ASRR)

6.10.1.4. \*AMC Aircrew Border Clearance Guide

6.10.1.5. \*FCB

6.10.2. Forms:

6.10.2.1. DD Form 1351-2, **Travel Voucher or Sub voucher**

6.10.2.2. DD Form 1351-2C, **Travel Voucher or Sub voucher (Continuation Sheet)**

6.10.2.3. \*DD Form 1854, **US Customs Accompanied Baggage Declaration**

6.10.2.4. \*CF 7507, **General Declaration Outward/Inward** (when required)

6.10.2.5. \*AF Form 15, **United States Air Force Invoice**

6.10.2.6. \*AF Form 315, **United States Air Force AVFuels Invoice**

6.10.2.7. AF Form 457, **USAF Hazard Report**

6.10.2.8. \*AF Form 651, **Hazardous Air Traffic Report (HATR)**

6.10.2.9. \*AF Form 1297, **Temporary Issue Receipt**

6.10.2.10. AF Form 3211, **Customer Comments**

6.10.2.11. AMC Form 43, **AMC Transient Aircrew Comments**

6.10.2.12. AMC Form 54, **Aircraft Commander's Report on Services/Facilities**

6.10.2.13. \*AF Form 711, **USAF Aircraft Mishap Report Worksheet**

6.10.2.14. AF Form 4031, **CRM Skills Criteria Training/Evaluation**

6.10.2.15. HMS Customs Declaration

6.10.2.16. Japanese Customs Declaration

6.10.3. Orders:

6.10.3.1. DD Form 1610, **Request and Authorization for TDY Travel of DoD Personnel**

6.10.3.2. AF Form 1631, **NATO Travel Orders** (when required)

6.10.3.3. \*AMC Form 41, **Flight Authorization**, or MAJCOM prescribed IAW AFI 11-401, *Flight Management*.

6.10.4. Miscellaneous:

6.10.4.1. \*Masking tape.

## 6.11. Route Navigation Kits.

6.11.1. A route navigation kit is issued at home station and remains with the aircraft until return. Kits contain sufficient quantities of material to cover the planned mission.

6.11.2. Minimum contents of route navigation kits are **Table 6.2**.

**Table 6.2. Route Navigation Kit Contents.**

ITEM	NUMBER
FLIP GP Planning (GP and appropriate AP/1, AP/1B, AP/2, AP/3)	1
FLIP IFR Supplement	2
FLIP Flight Information Handbook	1
FLIP En route (high and low)	2
FLIP Instrument Approach Procedures (high and low for theaters to be transited)	3
Standard Instrument Departures ( for theaters to be transited)	3
Standard Terminal Arrival Routes (for theaters to be transited)	3
Topographical and Sectional Charts for areas of operation (GNC/OPC/TPC/JNC)	as required
FLIP VFR Supplement	1
DoD Area Arrival Charts	(2) if available

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

## 6.12. Briefing Requirements.

6.12.1. Aircraft Commander Briefing. Brief crewmembers on specific mission details using locally-developed briefing guides. As a minimum, brief the following:

6.12.1.1. Time hack

6.12.1.2. Aircraft call sign, tail number, configuration, and fuel load

6.12.1.3. Introduce crewmembers and check orders for accuracy

6.12.1.4. Mission itinerary, including fuel stops and crew duty time limits

6.12.1.5. Review weather

6.12.1.6. Review patient information, including altitude restrictions and seat release

6.12.1.7. Personal requirements for crewmembers (e.g., FCIF, passports, and line badges)

6.12.1.8. Normal procedures

6.12.1.9. Emergency procedures, including hijacking and emergency ground evacuation

6.12.1.10. Crew conduct, and RON considerations

6.12.2. Specialized Briefing. Specialized briefings should be held immediately following the aircraft commander's briefing as required. Appropriate crewmembers must attend each briefing. Types of specialized briefings include:

6.12.2.1. Aeromedical evacuation crew briefing

6.12.2.2. Route study

6.12.2.3. Threat analysis and review of tactics, OPORD, or Special Instructions.

6.12.3. Weather Briefings. Request a written weather briefing on DD Form 175-1, **Flight Weather Briefing**, or AMC Form 181, **Mission Weather Briefing**. **EXCEPTION:** Verbal weather briefings are acceptable for local training missions. Obtain a briefing on current weather, trends, and forecast for the proposed route, destination, and alternates. If the flight will transit a non-Air Force bases, crews must make arrangements to ensure adequate weather support facilities and services are available. If adequate services are not available, crews will obtain weather support through any means available to ensure required weather data is in their possession prior to mission accomplishment. When face-to-face briefings are not possible, obtain a telephone weather briefing (precedence up to and including IMMEDIATE is authorized). The designated MAJCOM regional briefing stations provide the telephone briefing for CONUS flights.

6.12.3.1. Obtain weather information from US Military weather services, any FAA-approved weather source, or any host nation civil or military weather source.

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

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

6.12.6. Intelligence Briefings. Intelligence briefings are required for all overseas missions. The controlling agency, aircraft commander, and unit intelligence personnel are jointly responsible to ensure the aircrew receives intelligence information relevant to the mission.

6.12.7. Patient/Passenger Briefings. Patients and passengers on AE missions will be briefed by the aeromedical evacuation crew IAW current abbreviated checklists. Passengers on OSA or CINC support missions will be briefed according to locally-developed briefing guides, which will be approved by operations group Stan/Eval. **C-9 Passenger/Patient Information Briefing Guide**, will be made available to all patients and passengers.

### 6.13. Call Signs.

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

6.13.2. Operational Missions. Aircraft will use call signs assigned by OPORD, FRAG, or diplomatic clearance. When flying peacetime AE missions, use the "EVAC" call sign followed by the unit-devel-

oped mission number (or as required by diplomatic clearance). OSA and CINC support C-9As use assigned call signs.

#### **6.14. Flight Planning Considerations.**

6.14.1. Instrument Flight Rules. Conduct flight operations under IFR to the maximum extent possible without unacceptable mission degradation. This does not preclude VFR training to maintain proficiency in mission essential VFR operations.

6.14.2. Cabin Altitude Restrictions. For AE missions, the GPMRC/TPMRC or tasking AE command element will advise flight planning personnel before the flight plan is prepared if a patient condition requires a cabin altitude restriction. The AC will maintain cabin altitude at the lowest practical level requested. If required for patient condition, the AC will request preferential handling from ATC at the earliest practical opportunity.

#### **6.15. Flight Data Verification.**

6.15.1. Aircrews should acquaint themselves with the mission and individual sortie requirements to ensure successful mission accomplishment. Wing and squadron staff should monitor crew activity and be available to resolve problem areas.

6.15.2. Computer Flight Plan (CFP) Use. Contracted CFPs or CFPs available from Air Force Global Weather Central (AFGWC/DOF) are the official sources of performance, navigation, and climatic data, including en route wind information. If stand-alone microcomputer based plans are used, each mission segment should utilize best wind data available. Only current, MAJCOM validated microcomputer programs will be used for flights involving C-9A aircraft.

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

6.15.4. CFPs will be verified by the flight crew for route definition and fuel computation accuracy prior to departure. Flight planning charts in section 8 of the performance manual will be used to determine the validity of CFP fuel burn rates. Pass any flight plan discrepancies to the agency producing the CFP. When reporting incorrect flight plans, include both the CFPI and the plan number.

6.15.5. All TOLD computations will be reviewed by another crewmember.

#### **6.16. Departure Planning:** (Refer to additional procedures as listed in the MAJCOM supplement to this instruction).

6.16.1. Gross Weight. Ensure that the aircraft does not exceed the maximum gross weight, zero fuel weight, or center of gravity limitations specified in the aircraft flight manual, T.O. 1C-9A-1. Gross weight may be further restricted by operating conditions such as wind shear, icing, temperature, pressure altitude, runway length and slope, airdrome weight bearing capacity, departure maneuvering, required climb gradients, and obstacles.

6.16.2. Departure Routing/Climbout Performance. Appropriate terrain charts must be reviewed prior to departure at unfamiliar airfields. Regardless of the type of departure flown (SID, Specific ATC Departure Instructions, IFR Departure Procedure, or VFR), the aircraft must be able to achieve the published climb gradient (for the runway to be used) with ALL ENGINES operating, and be able to

vertically clear all obstacles within the climbout flight path with one engine inoperative. In all cases, the minimum required ENGINE OUT climb gradient for the C-9A is 2.5%.

6.16.2.1. SIDs. OPRs for SIDs are identified on each individual SID. They are either Federal Aviation Administration (FAA), United States Army (USA), United States Navy (USN), United States Marine Corps (USMC), or United States Air Force (USAF). On non-DoD SIDs, the agency that wrote the SID will also be identified (in parentheses immediately to the right of the Chart Reference Number). For example:

6.16.2.1.1. SL-000.00 (USA) would indicate a DoD SID where the US Army is both the OPR and the agency that wrote the SID.

6.16.2.1.2. (USAF) SL-000.00 (RAF) would indicate a non-DoD SID where the USAF is the military department that requested publication and serves as the OPR, but the Royal Air Force is the agency that wrote the SID. Use the agency that wrote the SID to determine the required screen height.

6.16.2.2. Published IFR Departure Procedures. Published IFR Departure Procedures are available at some civil and military fields to assist in avoiding obstacles during climb to the minimum enroute altitude (MEA). Airfields with Published IFR Departure Procedures will have the inverted triangle with a white "T" symbol printed on the approach plates and SIDS. When using Jeppesen publications, IFR Departure Procedures will be on the airfield diagram page which is typically on the reverse side of the first approach of the airport. A climb gradient and/or specific routing and/or alternate takeoff weather minimums will normally be specified with a Published IFR Departure Procedure. When flying a Published IFR Departure Procedure, depicted routing and climb gradients must be flown to avoid obstacles. The alternate takeoff weather minimums allow aircraft to depart with minimum ceiling and visibility. The C-9A is not authorized to use these alternate takeoff weather minimums.

**NOTE:** If the Published IFR Departure Procedure does not include either a routing or a minimum climb gradient (i.e., it includes only alternate takeoff weather minimums) then an IFR departure from that airfield IS NOT AUTHORIZED unless you fly a SID or depart via radar vectors.

6.16.2.3. 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 radar vectors can be provided.

**NOTE:** In no case will VFR departures be flown in lieu of obstacle clearance planning.

6.16.2.4. Specific ATC Departure Instructions (Specific climbout instructions or "radar vectors"). Crews may depart via specific ATC departure instructions, however, the SID prescribes a safe route of flight for a climb to the en route structure, while minimizing radio communication. Even if you plan to depart via specific ATC departure instructions, the crew should still have the SID on board (if published).

6.16.2.5. Runway Slope Calculations. When using non-DoD/NOAA airfield diagrams and approach plates to determine runway information for takeoff and landing data calculations, the aircrew must calculate runway slope since non-DoD/NOAA charts do not do this for you. To calculate runway slope you must extract the departure end elevation and the approach end elevation from the airfield diagram and use the following formula:

$$\text{Slope in Percent} = \frac{(\text{Departure End Elevation} - \text{Approach End Elevation})}{\text{Runway Length}} \times 100$$

6.16.3. Screen Heights Requirements. From a performance computation point of view, required screen heights are in essence obstacles and will be treated as such in addition to any other physical obstacles for the departure. Decrease the runway available by that distance required to reach the DER at the required screen height. This distance can be computed from the climbout flight path charts in the performance manual. Use the following as a guide to determine required screen heights.

**NOTE:** Screen height requirements for departures depend on the agency that wrote the departure and/or the airfield where the departure is being flown. There is no standard or easy way for crews to determine required screen height requirements in some cases. Therefore, when using departures other than those listed below, or when any doubt exists about which screen height to use, plan to cross the DER at 35-feet (minimum) unless you can ascertain a different screen height requirement from the appropriate authority.

6.16.3.1. SIDs. Required Screen heights depend on the agency that wrote the SID (identified in parenthesis immediately to the RIGHT of the SID Chart Reference Number).

6.16.3.1.1. USAF, USN, or USMC SID: Zero feet.

6.16.3.1.2. US Army and FAA SID: 35-feet.

6.16.3.1.3. Foreign Civil SID (must be ICAO member nation, FLIP GP): 16-feet.

6.16.3.1.4. Foreign Military SID (NATO, ICAO member nation, FLIP GP): 35-feet.

6.16.3.1.5. Foreign Military SID (Non-NATO, ICAO member nation, FLIP GP): 16-feet.

6.16.3.2. Radar Vector, Published IFR Departure Procedure or VFR Departures.

6.16.3.2.1. USAF, USN, or USMC Airfield: Zero-feet.

6.16.3.2.2. US Army and FAA Civil Airfield: 35-feet.

6.16.3.2.3. Joint Use Airfield with the United States: 35-feet.

6.16.3.2.4. Foreign Civil Airfield (must be ICAO member nation, FLIP GP): 16-feet.

6.16.3.2.5. Foreign Military Airfield (NATO, ICAO member nation, FLIP GP): 35-feet.

6.16.3.2.6. Foreign Military Airfield (Non-NATO, ICAO member nation, FLIP GP): 16-feet.

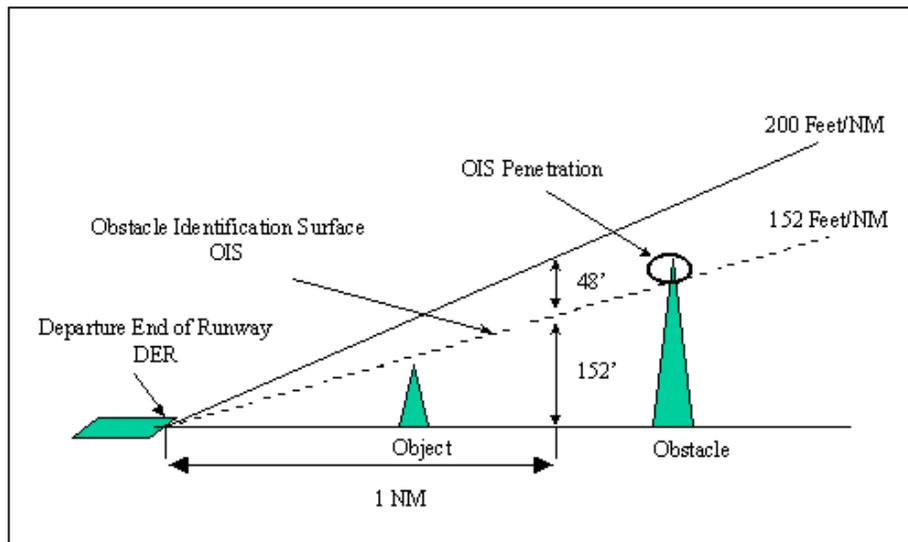
6.16.4. Climbout Performance. C-9A climb performance is not linear. Performance manual gradients represent a snap shot view of the climb capability of the aircraft at the instant the gear is fully retracted. Since aircraft climbout is not linear, do not equate required climb gradient to aircraft climb profile. The only way to ensure obstacle clearance is to plot all significant obstacles on the climbout flight path charts contained in the performance manual.

**6.17. Obstacle Clearance Planning:** (Refer to additional procedures listed in the MAJCOM supplement to this instruction).

6.17.1. Begin collecting obstacle information during mission planning, prior to departing home station. Obstacle Identification Surface (OIS). Obstacle identification for SID purposes (FAA Handbook 8260.55-9, *UV Standard for Terminal Instrument Procedures (TERPS)*), are those objects that

penetrate an OIS of 40:1 (152-feet per NM). Calculation of the OIS on a SID continues until the SID reaches a MEA or until the SID terminates. Climb gradients of 200-feet per NM will provide at least 48-feet per NM clearance above all obstacles that do not penetrate the OIS. Complying with published climb gradients found on a SID or IFR departure procedure will provide at least 48-feet per NM clearance above all obstacles that do penetrate the OIS. The aircraft commander must be aware and thoroughly brief the crew on all obstacles along the departure flight path.

**Figure 6.1. Obstacle Identification Surface.**



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

6.17.1.2. Aircrews may contact HQ AMC/DOVS at DSN 576-3112 for additional airfield obstacle data.

6.17.2. Objects penetrating the OIS may or may not be depicted. (They definitely will not be depicted on civil procedures). Objects which do not penetrate the OIS will not normally be depicted, but may still require consideration in takeoff planning since aircraft climbout is not linear (when accomplishing the ENGINE OUT departure profile, leveling at pressure height for acceleration may result in penetration of the OIS). The only way to ensure obstacle clearance on any departure is to plot all significant obstacles.

6.17.3. SIDs simplify ATC procedures while providing safe routing to the enroute structure; however, SIDs should not be used as the sole source of obstacle information for departure planning. If used as such, inadequate (ENGINE OUT) obstacle clearance may result. An asterisked climb gradient is applicable to a physical obstacle and is based on the controlling obstacle. The controlling obstacle is defined as the obstacle requiring the greatest climb gradient within the flight path. Crews must be aware that other obstacles may be present. Obstacles are not normally depicted on SIDs when climb gradients of less than 152-feet per NM are required to clear them. Use all available sources to determine other significant obstacle information. The only way to ensure obstacle clearance is to plot all significant obstacles using the climbout flight path charts contained in the performance manual. SIDs,

instrument approach plates, and topical sectional charts, etc. must be used to determine the distance and height values for all significant obstacles along the flight path. Crews need not consider ATC climb gradient (dagged items), however, crews must verify that the aircraft can meet these ATC restrictions with ALL ENGINES operating. If the aircraft cannot meet the ATC ALL ENGINE climb gradient restriction, an ATC waiver is required prior to takeoff.

6.17.4. Before flying any departure, the aircrew will compute takeoff data in the following manner:

6.17.4.1. Using the performance manual climbout flight path charts, compute the required ENGINE OUT climb gradient to clear all obstacles (if obstacles are not a factor, use 2.5%). Review appropriate terrain charts, the ASRR, instrument approaches, sectionals, departure plates, etc. to determine obstacles.

6.17.4.2. If a screen height is required (see paragraph 6.16.3., paragraph 6.16.3.1., and paragraph 6.16.3.2.), compute the minimum ENGINE OUT climb gradient required to meet it.

## 6.18. Alternate Planning.

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

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

6.18.3. Alternates must meet the alternate airport weather requirements according to AFI 11-202V3.

## 6.19. Departure Alternates.

6.19.1. A departure alternate is required if ceiling or visibility is below landing minimums for an available approach (at departure aerodrome). See paragraph 6.32. for takeoff weather minimums. Do not use Category II ILS minimums to determine if a departure alternate is required.

6.19.2. Suitability of Departure Alternates. When departure alternate is required, the aircraft must be capable of maintaining the MEA or MOCA, whichever is higher, to the alternate using one engine out performance criteria. To qualify as a departure alternate the airfield must meet one of the following conditions:

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

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

**6.20. Destination Requirements (*for filing purposes*).** The forecast destination weather will be according to AFI 11-202V3 and the following:

6.20.1. File two alternates when:

6.20.1.1. The forecast weather is less than required minimums for the lowest compatible approach.

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

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

**EXCEPTION:** Not required for intratheater flights of 3-hours or less. Comply with AFI 11-202V3 alternate weather requirements.

6.20.3. When filing to a remote or island destination, aircrews may use 1 + 15 holding fuel (in lieu of an alternate). Compute holding fuel using planned destination gross weight at FL 200. A remote or island destination is defined as any aerodrome 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:

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

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

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

6.20.4. When filing to a destination where the alternate is located in Alaska or at latitudes greater than 59-degrees, carry an additional 30-minutes of holding fuel. In this case, the minimum planned fuel overhead planned destination would include fuel for approach/landing, alternate/missed approach, fuel reserve, and 30-minutes holding fuel. Compute holding fuel using planned destination gross weight, FL200.

## 6.21. Adverse Weather.

6.21.1. Flight into areas of known or forecast freezing rain is prohibited. Except when using commercial Type II de-icing fluids, takeoff in freezing drizzle or light freezing rain is prohibited. Refer to Flight Manual for further limitations.

6.21.2. During flight, use any means available to avoid thunderstorms by at least:

6.21.2.1. 20 NMs at or above flight level FL230.

6.21.2.2. 10 NMs below FL230.

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

6.21.4. 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 above criteria.

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

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

6.21.5.1. Attempt to maintain VMC.

6.21.5.2. Maintain at least 5 NMs separation from heavy rain showers.

6.21.5.3. Avoid areas of high lightning potential, i.e., clouds within plus or minus 5,000-feet and/or 8 degrees C of of the freezing level.

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

6.21.6. Aircrews performing approaches and landings at locations where temperatures are zero degrees centigrade or below will refer to the Flight Information Handbook, section D, Temperature Correction Chart, to correct minimum descent altitude (MDA), decision height (DH), and other altitudes inside the final approach fix (FAF) if required.

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

6.21.7.1. Mountain wave turbulence is normally a predictable condition. Forecasters at base weather stations, using guidance products from weather centers, can advise crews of the potential for encountering mountain wave turbulence along planned routes of flight.

6.21.7.2. Weather data availability in mountainous regions and forecast model limitations prevent the prediction of all events.

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

6.21.8. Flight into areas of forecast or reported severe icing or severe turbulence is prohibited.

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

## **6.22. Fuel Conservation.**

6.22.1. Conservation of fuel requires all pilots' active participation. For every pound of excess fuel, 3 percent of the excess will be burned each hour. Do not carry extra fuel for convenience. Unidentified extra fuel should not exceed Required Ramp Fuel Load (RRFL) by more than 3,000 pounds.

6.22.2. See AMCPAM 11-3, *Fuel Conservation*, for guidelines and the following:

6.22.2.1. Use optimized CFPs when possible.

- 6.22.2.2. Long range cruise (LRC) and optimum altitude should be flown when possible.
  - 6.22.2.3. Limit the use of the APU when possible.
  - 6.22.2.4. Use external power vice APU when temperatures do not require heating/air conditioning.
  - 6.22.2.5. Delay engine start (normal engine start is 15-20-minutes prior to takeoff).
  - 6.22.2.6. Use single engine taxi out/taxi in when conditions allow.
  - 6.22.2.7. Cruise CG should be aft if practical.
  - 6.22.2.8. Fly en route descents when possible.
- 6.22.3. Fuel loads:
- 6.22.3.1. C-9A units may develop standard ramp loads that meet the minimum local training mission requirements or emergency evacuation requirements (whichever is less).
  - 6.22.3.2. De-fuel should not be required if RRFL is less than the standard ramp fuel load.

### ***Section 6C—Preflight***

**6.23. AFTO Form 781A, Maintenance Discrepancy and Work Document, according to T.O. 00-20-5.** Review AFTO Form 781A 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. If one of these individuals is not available, the aircraft commander may sign the exceptional release. Ensure that the DD Form 1896, **Jet Fuel Identification Plate**, and AIRcard is aboard the aircraft.

### **6.24. Aircraft Servicing and Ground Operations.**

- 6.24.1. Except when refueling with JP-4 or JET-B while patients or passengers remain onboard, a standby crash fire rescue vehicle is not required for C-9A ground operations unless requested by the AC or otherwise required by TO 00-25-172.
- 6.24.2. Aircraft Refueling. Crewmembers qualified in ground refueling may perform refueling duties. Crewmembers acting as refueling supervisors and panel operators will comply with T.O. 00-25-172 and applicable T.O. 1C-9A-2 series T.O.s. The APU will be used as the primary power source for refueling. Crewmembers other than the crew chief will only refuel in cases when maintenance support is not readily available and the mission would be delayed. Crewmembers may augment maintenance refueling teams at en route stops. Refueling requirements should be passed to the transient maintenance facility as soon as practical. When US military fuel is not available, use contract fuel. Use non-contract fuel only when absolutely necessary.
- 6.24.3. Concurrent Ground Operations. Concurrent ground operations (simultaneous refueling or de-fueling while loading or maintenance operations are being performed) are authorized in accordance with T.O. 00-25-172. During concurrent servicing, three way interphone contact will be established between a pilot or other qualified crewmember in the cockpit, fuel servicing crewmember (who may act as CSS supervisor), and a safety observer (e.g. CMT, CSO). If interphone communication cannot be established/maintained, an alternate means of communication must be found before refueling may commence/continue. Patients, passengers, and crewmembers may remain on board the air-

craft during refueling. If patient/passenger requirements and comfort permit, the APU may be shut down for refueling.

**NOTE:** Concurrent oxygen servicing, although authorized by TO 00-25-172, is not authorized for routine use on C-9As. It will be used only during critical situations where time is of the utmost importance in mission success, i.e. urgent mission or priority and urgent patients being stopped short of their final destination due to crew duty expiring if not utilized. Follow all restrictions in TO 00-25-172.

6.24.3.1. Individuals must properly ground themselves before boarding the aircraft or handling fuel servicing equipment. Concurrent servicing, loading, and maintenance must be conducted according to T.O. 00-25-172 and current checklists, which will be reviewed before concurrent operations.

6.24.3.2. Simultaneous fuel and oxygen servicing is not authorized.

6.24.3.3. Refueling should be accomplished after deplaning offload and prior to enplaning onload to minimize total personnel on board in case of emergency. During extreme weather conditions, patients waiting in AMBUSes and ambulances may be enplaned.

6.24.3.4. Exits will be opened as much as practical as determined by the aircraft commander or MCD, based on weather and patient conditions. Under no circumstances will door exits be locked. When patients requiring litter egress are aboard, the ramp shall be extended. Two qualified AECMs, one of whom will be a qualified FN, will be on board to assist in the evacuation of patients/passengers.

6.24.3.5. Crewmembers may enplane or deplane to accomplish duties.

6.24.3.6. Crewmembers will ensure compliance with “no smoking” restrictions, and will be ready to assist in deplaning in the event of an emergency.

6.24.3.7. The safety observer will be stationed at the nose of the aircraft and will monitor the left wing fuel vent. Restrict access to the refueling area to necessary personnel only.

6.24.4. Electric and electronic equipment may be on (prior to) provided it does not radiate energy, but do not turn on or off during refueling.

**EXCEPTION:** Patients, passengers, or crewmembers may use call buttons, life support equipment, and lavatory, and the INS/GPS may be “on” and may be updated during refueling operations. A UHF or VHF radio may also be used. Galley ovens may remain on if they were activated prior to commencing refueling.

6.24.5. Loading or unloading patients/passengers may be accomplished during single point refueling, but should be limited to large fuel onloads and patient/passenger transfers with a requirement for minimum ground time, such as when medical emergencies or approaching severe weather exists. The CSS will coordinate with all personnel involved prior to beginning concurrent operations.

6.24.6. Maintenance requiring the aircraft be on jacks will not be performed during loading, fueling, or when patients/passengers are on board.

**EXCEPTION:** Single wheel changes may be accomplished on multiwheel main and dual wheel nose gear installation during fueling operations, providing the jacking is performed at the affected gear and not at the wing or fuselage jack points. In this case, passengers/patients may remain on board.

6.24.7. Maintenance of the aircraft electrical, radio, radar, or other systems requiring the use of electrical power shall not be accomplished during refueling operations.

6.24.8. Consult TO 00-25-172 for other concurrent servicing restrictions.

**6.25. Oxygen Requirements.** Comply with oxygen requirements listed in AFI 11-202V3.

6.25.1. Aircraft oxygen quantity before takeoff must be sufficient to accomplish the planned flight or divert should emergency oxygen be required.

6.25.1.1. The intended route of flight must be carefully examined to ensure that there is sufficient fuel and oxygen on board to allow for the following:

6.25.1.1.1. Simultaneous engine failure and loss of cabin pressurization (from any position along the route).

6.25.1.1.2. An emergency descent to 10,000-feet MSL.

6.25.1.1.3. Continued flight at 10,000-feet MSL, single-engine cruise speed, to the nearest available emergency airfield.

6.25.1.2. For flights without patients or passengers, where the total number of individuals on board the aircraft does not exceed 8, the minimum quantity of fuel and oxygen aboard an aircraft before takeoff may be calculated assuming:

6.25.1.2.1. Simultaneous engine failure and loss of cabin pressurization (from any position along the route).

6.25.1.2.2. Emergency descent to Single Engine Service Ceiling.

6.25.1.2.3. Continued flight at Single Engine Service Ceiling, single-engine cruise speed, to the nearest available emergency airfield.

6.25.1.2.4. Compute oxygen required using 100-percent oxygen.

**6.26. Fleet Service Equipment.** An AET or flight steward will ensure required fleet service items are aboard and stowed prior to departure. Fleet service items should be aboard the aircraft early enough to permit inventory 30-minutes before takeoff time.

**6.27. Passenger Handling.** ACs and MCDs will provide the maximum opportunity for passengers to travel. Aircraft will depart home station for missions with the optimum configuration for patient care and will not routinely be reconfigured during missions unless required due to patient onload.

6.27.1. Passenger's Seat Release. The MCD will identify any passenger restrictions based upon patient considerations prior to seat release; after consulting with the MCD, the AC will determine the number of seats to be released.

6.27.2. Passenger Manifesting. At locations without a passenger processing agency, the AC will ensure all passengers are manifested and the required antihijacking inspections are performed. Leave a list of departing passengers with a responsible ground agency prior to departure IAW AFI 11-202V3.

6.27.3. Passenger Supervision. After the anti-hijacking inspection, passengers will be under the constant supervision of a passenger service representative or a crewmember. The AC will ensure the anti-

hijacking inspection is re-accomplished prior to boarding passengers when unable to provide constant supervision.

6.27.4. Passenger Briefing. Accomplish IAW paragraph 6.12.7.

6.27.5. DV Passengers. Coordinate with the controlling agency prior to releasing seats with a DV-4 or higher onboard.

6.27.6. Passengers at En Route Stops. If patient requirements (e.g., add-ons or reconfigurations) necessitate offloading passengers, offload in the following sequence:

6.27.6.1. Space Available passengers---using date and time of sign up within each category

6.27.6.2. R---retired military, reservists, and ROTC cadets

6.27.6.3. F---permissive TDY and foreign military

6.27.6.4. E---unaccompanied dependents on Environmental and Morale Leave (EML) (overseas only)

6.27.6.5. D---ordinary leave or pass status, service academy cadets

6.27.6.6. C---EML sponsors and accompanying dependents (overseas only)

6.27.6.7. B---hostile fire leave

6.27.6.8. A---space available emergency leave

6.27.6.9. Duty passengers

6.27.7. Duty passengers have priority over space available passengers. At enroute stops where seats are not available for duty passengers, the AC (in coordination with the MCD) will decide if time permits the offloading of space available passengers in order to accommodate duty passengers. Use the above priority to deplane the space available passengers.

6.27.8. Disabled Passengers. C-9A aircrews will make every effort to accommodate disabled passengers who are eligible for military air transportation. Disabled passengers will be denied travel only when the travel clearly presents unacceptable risks to the passenger. Comply with the following procedures when transporting disabled passengers:

6.27.8.1. The crew will assist as necessary during loading, seating, and offloading of the disabled passenger. If he/she is unable to board the aircraft using the stairs, he/she will be enplaned or deplaned on a litter using the litter ramp. The disabled passenger will be seated in a passenger seat and will not travel on a litter.

6.27.8.2. Disabled passengers will not be seated next to an emergency exit.

6.27.8.3. Disabled passengers who require in flight assistance for eating, medications, or in restrooms, will travel with a capable authorized escort.

## **6.28. Patient Loading Factors.**

6.28.1. Patient Preparation. A flight surgeon, if available, will determine the patient's suitability for AE on the C-9 aircraft. Medical authorities requesting the patient's evacuation must be informed of the in-flight physical stress on the patient. If the MCD determines the patient's medical condition is beyond the capability of the AE crew or aircraft, they will contact the GPMRC/TPMRC or tasking AE

command element for further guidance. The MCD, in coordination with the appropriate theater validating authority, may refuse to accept any patient whose medical condition is beyond their capability. The MCD will advise the AC when a patient's condition or use of medical equipment may affect aircraft operations.

6.28.2. Normally no more than three litter patients are placed in one litter tier, except as approved by the MCD.

6.28.3. Ambulatory patients will not be placed on litters to accommodate passengers.

6.28.4. When required/mission load permits, a minimum of one seat will be reserved for every three litter patients on all AE missions. A minimum of two litters will be set up for ambulatory patient use on mission legs scheduled to exceed four hours in length.

6.28.5. All airline-type seats are designated as patient/passenger seats. Evaluators, instructors, and the crew chief may occupy an airline type seat when no patient or passenger requirement exists or when mission requirements dictate at the aircraft commander's discretion. When patient/passenger seating requirements allow, AECM instructors and flight examiners should be seated in an airline seat near the student or examinee.

**6.29. Procedures for Airlifting Hazardous Cargo.** Hazardous materials, according to AFJMAN 24-204, will not be carried on C-9A aircraft.

**EXCEPTION:** Aircraft commanders may authorize transportation of personal items which are normally allowed on commercial carriers. Examples of items which may be carried in checked baggage include unloaded personal weapons, small quantities of securely boxed personal cartridges (excluding ammunition with explosive or incendiary projectiles), and battery operated wheelchairs, when properly secured (battery disconnected and stored upright, etc.).

6.29.1. Oxygen carried for medical use by a patient or passenger is authorized without restriction. Oxygen will not be carried in either cargo bay, it must be accessible in flight.

**6.30. Handling of Classified Cargo, Registered Mail, NMCS/VVIP/FSS Shipments, and Courier Material.**

6.30.1. Receipts will be obtained for classified cargo, NMCS/VVIP/FSS shipments, and registered mail at the on-load and off-load station using the cargo manifest.

6.30.1.1. Defense Courier Service (DCS) couriers are authorized to designate officer and enlisted (E-5 and above) crewmembers on military aircraft as couriers to escort and safeguard courier material when other qualified personnel are not available. Qualified passengers will be designated prior to designating crewmembers. The following restrictions apply.

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

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

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

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

- 6.30.2.1.1. DCS courier
- 6.30.2.1.2. TOP SECRET control officer of the US armed forces
- 6.30.2.1.3. US Department of State diplomatic courier
- 6.30.2.1.4. US Department of State activity
- 6.30.2.1.5. US military guards
- 6.30.2.1.6. US DoD civilian guards

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

### ***Section 6D—Departure***

**6.31. On Time Takeoffs.** Mission departures are on time if the aircraft is airborne within minus20/plus14-minutes (or MAJCOM defined) of the scheduled takeoff time.

6.31.1. Early Departures: May be further supplemented by MAJCOMs.

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

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

**6.32. Weather Minimums for Takeoff.** Use [Table 6.3](#).

**Table 6.3. Weather Minimums for Takeoff.**

<b>Mission</b>	<b>Visibility</b>	<b>Remarks</b>
Operational	RVR 1000	When less than RVR 1600, but equal to or greater than RVR 1000, the crew may take off if mission priority dictates, provided the runway has dual RVR readouts and displays (minimum RVR 1000 on both) and runway centerline lighting is operational. For any takeoff below 1600 RVR, the crew must be fully qualified.
All others	RVR 1600	For runways with more than one operating RVR readout, RVR must read 1600 minimum on all.

**NOTE:** When weather is below approach and landing minimums (ceiling or visibility) a takeoff alternate is required, see paragraph [6.19](#) requirements).

### ***Section 6E—En route***

**6.33. Flight Progress.**

6.33.1. For intertheater flights, prior to departure plot the oceanic portion of the flight on an appropriate chart. Annotate the chart with the mission number, aircraft commander's name, preparer's name, and date. If practical, chart may be reused.

6.33.2. Anytime waypoint data is inserted into the INS, it will be verified by both pilots. Check present position, all waypoint coordinate information, and the distances between waypoints against the flight plan.

6.33.3. In-flight, use all available navigational aids to monitor INS performance. Immediately report malfunctions or any loss of navigation capability which degrades centerline accuracy to the controlling ARTCC.

6.33.4. Operations in International/Territorial Airspace. (See FLIP, GP, AP, and the FCG, for further guidance) US military aircraft and DoD personnel entering another nation to conduct US government business therein must have the approval of the foreign government concerned to enter their airspace. Foreign clearances for US international air operations are obtained through US officials known as Defense Attaché Officers (DAOs).

6.33.4.1. 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.

6.33.4.2. Consistent with international law, the US 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 US does not normally recognize territorial claims beyond 12 nautical miles; however, specific guidance from certain US authorities may establish limits which differ from the standard.

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

6.33.4.4. 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).

6.33.4.5. Violations of foreign sovereignty result from unauthorized or improper entry or departure of aircraft. Aircrews should not enter into territorial airspace for which a clearance has not been duly requested and granted through diplomatic channels.

6.33.4.6. Air traffic control 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.

6.33.4.7. In the event air traffic control 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 air traffic control agency that the aircraft will continue to

planned destination as cleared in international airspace. The essential phrase is “in international airspace.” Safety-of-flight is paramount in determining mission continuation. Under no circumstances should aircrews construe a clearance which routes their mission over sovereign airspace which was not approved through diplomatic channels prior to mission departure, as being valid authorization.

6.33.4.8. Aircrews operating missions requiring unique or specially developed routing will normally be briefed at home station, onload station, and/or by the last C2 facility transited prior to performing the critical portion of the mission.

6.33.4.9. Aircrews normally are not tasked to and should not fly “due regard” routing unless specifically directed in the mission FRAG or for AMC-directed mission, coordinated with proper authorities through the controlling agency. The “due regard” or “operational” option obligates the military aircraft commander to be his or her own air traffic control agency and separate his or her aircraft from all other air traffic. If operational requirements dictate, aircraft commanders may exercise the “due regard” option to protect their aircraft. When the threat has terminated, the aircraft will return to normal Air Traffic Services.

**6.34. Navigational Aid Capability.** When using INS or GPS as the primary means of navigation along Category I or oceanic routings:

6.34.1. The AC will maintain a CFP or manual flight plan as a backup to INS/GPS navigation.

6.34.2. An appropriate plotting chart such as a global navigation chart (GNC) or oceanic plotting chart (OPC) will be carried with the intended route plotted and updated). Local unit may determine a standard plotting chart in [Chapter 10](#). Refer to paragraph [5.18](#).

6.34.3. North Atlantic minimum navigation performance specification (MNPS) airspace and US West Coast and Hawaii route system procedures are as follows:

6.34.3.1. Minimum navigation performance specification standards (FLIP AP/2) are mandatory (single INS).

6.34.3.2. Aircraft that lose one INS prior to airspace entry will return to the nearest maintenance facility.

6.34.3.3. The C-9A is approved for MNPS airspace when modified with FMS-800 (integrated GPS).

**NOTE:** With one INS inoperative, advise ATC unless within range of normal radio aids. Check the accuracy of remaining INSs using all available navigation aids.

6.34.4. Reduced Vertical Separation Minimum (RVSM) Airspace. Airspace where RVSM is applied is considered special qualification airspace. Both the operator and the specific aircraft type must be approved for operations in these areas. Currently, the C-9A is not approved for operations in RVSM airspace. Refer to FLIP AP/2 for most current areas affected by RVSM.

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

6.34.4.2. The autopilot should be engaged during level cruise, except when circumstances such as the need to re-trim the aircraft or turbulence require disengagement.

6.34.4.3. Crosscheck the altimeters prior to or immediately upon coast out. Record readings of both altimeters and retain for use in contingency situations.

6.34.4.4. Continuously crosscheck the primary altimeters to ensure they agree  $\pm$  200-feet.

6.34.4.5. Aircrews should limit climb and descent rates to 1,000-feet per minute when operating in the vicinity of other aircraft to reduce potential effects on TCAS operations.

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

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

6.34.5. Basic Area Navigation (BRNAV) Airspace. Airspace where BRNAV is applied is considered special qualification airspace. Both the operator and the specific aircraft type must be approved for operations in these areas. BRNAV navigation accuracy criteria is RNP-5. The C-9 is not approved for BRNAV operations until FMS-800 modified.

6.34.5.1. Minimum equipment to operate in BRNAV airspace is one INS capable of updates or a FAA approved GPS with Receiver Autonomous Integrity Monitoring (RAIM) or equivalent system. Flights entering BRNAV airspace after long overwater flight must be especially aware of BRNAV tolerances and update accordingly.

6.34.5.2. Aircraft unable to maintain BRNAV tolerances must advise ATC immediately and take appropriate coordinated action.

6.34.6. 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. RNP airspace is being incorporated around the world to increase air traffic capacity by decreasing separation requirements between routes. The C-9A is approved for RNP only when modified with FMS-800 (integrated GPS with RAIM), with no time restrictions.

**NOTE:** If the capability to update the inertial navigation solution with the GPS or RAIM is lost, the aircraft is limited to 5.9 hours of operation in RNP-10 airspace after the GPS updating ability or RAIM is lost.

6.34.6.1. RNP-10. Compliance includes navigation accuracy within 10NM of actual position 95% of the time. Aircraft not possessing integrated GPS with receiver autonomous integrity monitoring (RAIM), or equivalent system, are limited in how long they may operate in RNP-10 airspace. The following are RNP-10 requirements:

6.34.6.1.1. To increase the 6.2-hour baseline, data collection on long overwater legs must still be accomplished and submitted to HQ AMC/XPY.

6.34.6.1.2. Flight Planning. Verify aircraft is approved for RNP operation, assess mission impact and verify the letter "R" is annotated in block 10 of the DD Form 1801, **International Flight Plan**.

6.34.6.1.3. Preflight Procedures. Review maintenance logs to ascertain status of RNP-10 equipment and particular attention should be paid to navigation antennas and the condition of the fuselage skin in the vicinity of these antennas.

6.34.6.1.4. Enroute. At least two long range navigation systems certified for RNP-10 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.

6.34.6.1.5. Document (in the aircraft forms) malfunctions or failures of RNP required equipment, including the failure of this equipment to meet RNP tolerances.

**6.35. CIRVIS and Other Reports.** Report all vital intelligence sightings from aircraft as indicated in FLIP planning or FLIP En route Supplement.

6.35.1. In-Flight harassment or hostile action against C-9A aircraft. Aircraft subjected to harassment or hostile action by foreign aircraft will immediately contact the nearest US Air Force air and ground voice facility and report the encounter. Include aircraft nationality, type, insignia, or any other identifying features; note position, heading, time, speed when harassed, and the type of harassment. Request relay of the report to the nearest CCC. Also attempt to contact the nearest command post when in UHF and VHF range.

6.35.2. Other incidents will be reported as indicated in JCS Pub 6, Volume V and AFM 10-206, *Operational Reporting*.

**6.36. In-Flight Meals.** The aircraft commander and copilot should not eat meals at the same time, and their meals should consist of different menus.

**6.37. Communications.**

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

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

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

**6.38. In-Flight Emergency Procedures.** Report deviations from directives that may occur as a result of an emergency in accordance with AFI 11-202V3 and this AFI.

6.38.1. Notification of Controlling Agencies. When practical after completing the aircraft emergency action checklists and associated actions crews should furnish the controlling agency and appropriate

CCC a description of the difficulty, assistance required, intentions, and any other pertinent information.

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

6.38.2.1. Local Area. When in UHF or VHF range, initiate the conference over appropriate frequencies.

6.38.2.2. En route. When out of UHF range, use HF radios to establish a telephone patch with the nearest or controlling C2 center as appropriate.

6.38.2.3. Provide the following information when time permits.

6.38.2.3.1. Narrative description of the situation to include actions taken by the crew and the intentions of the aircraft commander.

6.38.2.3.2. Fuel on board and hours of endurance.

6.38.2.3.3. Position.

6.38.2.3.4. Altitude and flight conditions.

6.38.2.3.5. Number of personnel and distinguished visitors (DV) on board.

6.38.2.3.6. Qualification of aircraft commander.

6.38.2.3.7. Planned landing base.

6.38.2.3.8. ETA at landing base.

**6.39. Continued Flight with Engine Loss.** With one engine inoperative, land as soon as safely feasible. Inconvenience to passengers and patients is a secondary consideration to flight safety.

**6.40. Need for Medical Assistance.** The MCD is responsible for coordination with originating and en route medical facilities regarding the physical condition of patients. Should a patient's condition change in flight, the MCD will request that a flight surgeon or physician reevaluate the patient's ability to withstand continued travel by air at the first stop possible. Matters affecting flight safety are the prerogative of the AC.

6.40.1. AIREVAC Priority. The AC may request "AIREVAC priority" for preferential ATC handling if a delay will affect a patient's well being. AIREVAC priority will only be used for that portion of the flight requiring expedited handling. Do not request priority for routine air evacuations to avoid ATC delays or inconveniences. It is the pilot in command's responsibility to use this option only for bonafide medical situations that demand priority handling.

6.40.2. Patient Death In-Flight. When a suspected death occurs in-flight, the planned itinerary will not be interrupted if the next scheduled stop is a US military airfield. If the next stop is a civilian airfield that does not service a US military medical facility, or a foreign military airfield, that stop will be over flown (mission requirements allowing). Coordination with command and control agencies is essential. The GPMRC/TPMRC or tasking AE command element must ensure that the MTF anticipating the aircraft's arrival at the civilian/foreign military airfield is informed of the cancellation.

6.40.2.1. When notified by the MCD that a suspected death has occurred in-flight, the AC should immediately provide the CCC with the following information: "A suspected death has occurred

in-flight on mission number \_\_\_\_\_. ETA to \_\_\_\_\_ is \_\_\_\_\_ Z.” The AC relays this information to the controlling agency for relay to the appropriate GPMRC/TPMRC or tasking AE command element. No personal data, such as name, SSN, etc., will be transmitted, to preclude premature release of information prior to official notification of the next of kin.

6.40.2.2. The GPMRC/TPMRC will ensure a physician meets the aircraft. The examining physician can pronounce the patient dead on arrival. To preclude any controversy over issuance of a state/country death certificate, no attempt should be made to pinpoint death at a time or place other than the point of examination. The MCD provides the appropriate GPMRC/TPMRC with all required information concerning patient data and events prior to the death.

6.40.3. Airlift of Human Remains. Remains of deceased personnel will not normally be carried on C-9A AE missions without approval of the MAJCOM command surgeon. However, in overseas locations where timely movement of remains is a factor which cannot otherwise be satisfied by subsequent airlift, unit commanders may authorize transportation of remains in the forward cargo compartment of C-9A aircraft. In such cases, the AC will ensure the onload and offload is conducted in a discrete manner.

#### **6.41. Weather Forecasts.**

6.41.1. It is the pilot's responsibility to obtain destination weather prior to descent.

6.41.2. The primary means is any US Air Force base weather station via pilot-to-meteorologist service (PMSV) or through a US Air Force aeronautical station. Check on the latest weather prior to descent or landing.

6.41.3. For aircraft flying in EUCOM AOR (ENAME operations) contact USAFE/OWS at Sembach AB GE (DSN 314-496-6145). SOUTHCOM AOR contact 25 OWS at Davis-Monthan AFB, AZ (DSN 228-1977).

6.41.4. The ATC system can provide weather information to en route aircraft.

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

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

#### ***Section 6F—Arrival***

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

6.42.1. Night and Marginal Weather Operations. Fly a precision approach, if available, at night or during marginal weather. If a precision approach is not available, fly any available approved instrument approach. During night VFR conditions, if an approved instrument approach is not available, a visual approach may be flown (only if a visual glide slope indicator (VASI, PAPI, etc.) is available).

On training and evaluation flights at familiar fields, pilots may fly non-precision approaches or VFR traffic patterns to accomplish required training and evaluations. The pilot not flying the approach will monitor a precision approach when practical to enhance safety.

6.42.2. Attempt to accomplish arrival briefings before entering the terminal area. The following altitudes will be included as required arrival briefing items; MEA, MSA, IAF, and the FAF. The VDP must also be briefed if it is available on the approach plate or computed.

### 6.43. Instrument Approach Procedures.

6.43.1. Before starting an instrument approach or beginning an en route descent, pilots will confirm that existing weather is reported to be at or above required minimums for the lowest compatible approach. Pilots shall increase the published visibility minimums of an instrument approach by  $\frac{1}{2}$  SM or as noted in NOTAMs, on ATIS, or on the approach plate, when the runway approach lighting system (ALS) is inoperative.

**NOTE:** This applies only to the ALS itself, not to VASIs, PAPIs, and other lights that are not a component of the ALS.

6.43.2. Full Flight Instrumentation. For all approaches, full flight instrumentation consists of two operational compass systems, both primary attitude indicators, and all differential pressure instruments. Additionally, for ILS approaches, equipment listed below must be used:

6.43.2.1. Category I ILS. At least one ILS receiver with dual flight displays. Two flight directors, or one flight director on the pilot's side and raw data course and glideslope presentation on the copilot's side.

6.43.2.2. Category II ILS. As required by the flight manual. Aircraft is not CAT II capable without all required equipment. No exceptions are permitted.

6.43.2.3. Less Than Full Flight Instrumentation. Loss of full flight instrumentation does not automatically require that approach minimums be adjusted. At the discretion of the OG/CC, experienced aircraft commanders may evaluate each situation to determine if the aircraft can be safely flown to published minimums. Copilots, FPs, and inexperienced aircraft commanders are restricted to minimums of no lower than a 300-foot ceiling and  $\frac{3}{4}$  statute mile visibility without full flight instrumentation.

6.43.3. Precision Approach Radar. Visibility will be no lower than 2400 RVR, or  $\frac{1}{2}$  mile when no RVR is available. DH will be based on a height above touchdown (HAT) of no less than 200-feet.

6.43.4. Circling Approach. If not published by category, minimum ceiling and visibility will be as published, but in no case lower than 500-1 and  $\frac{1}{2}$  (Cat C) or 600-2 (Cat D).

6.43.5. Category II ILS Procedures. Maximum crosswind limitation is 10 knots. Crosswind of 15 knots may be used during training approaches (requires weather at CAT I ILS minimums or greater).

6.43.5.1. See AFMAN 11-230, *Instrument Procedures*, requirements. As a minimum, the following airfield and aircraft equipment must be operational:

6.43.5.1.1. Approach lights.

6.43.5.1.2. Runway centerline lighting.

6.43.5.1.3. High intensity runway lights or touchdown zone lights.

6.43.5.1.4. Approach end transmissometer.

6.43.5.1.5. ILS FAR field monitor.

6.43.5.1.6. Minimum RVR of 1200.

6.43.5.1.7. HAT of 100 feet minimum.

6.43.5.1.8. Sequenced flashers.

6.43.5.2. Aircrews will not execute an actual CAT II ILS to minimums unless both pilots are qualified and current in CAT II ILS. The aircraft commander must have logged at least 100 hours in command since aircraft commander qualification.

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

6.43.6.1. Do not continue the approach below minimums unless the aircraft is in a position to make a safe landing and the runway environment is in sight. CAT II approaches will not be continued if weather is reported below CAT II minimums.

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

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

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

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

6.43.7.2. Jeppesen and Host Government Instrument Approaches. These type of approaches may be used with MAJCOM approval according to AFI 11-202V3. Crews will contact the controlling agency to confirm approval before attempting the approach(s).

#### **6.44. Classified Equipment and Material.**

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

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

6.44.3. Aircrews will ensure that they have an operable mode 4 when required for mission accomplishment. Aircrews will conduct an operational ground test of the mode 4 (ground test assets permitting) prior to deployment overseas. Also complete the test when specified in the OPOD or contingency/exercise tasking.

6.44.4. Attempt to fix an inoperable mode 4 prior to takeoff. Do not delay takeoff nor cancel a mission for an inoperable mode 4, except when the aircraft will transit an area where safe passage procedures are implemented.

6.44.5. Conduct an in-flight check of the mode 4 on all missions departing the CONUS for overseas locations. Aircrews can request the mode 4 interrogation check through NORAD on UHF frequency 364.2. Request an interrogation test through the appropriate Sector Operations Center (SOCCs) in [Table 6.4](#).

**Table 6.4. Sector Operations Centers (SOCC).**

CONUS SECTOR	LOCATION	CALL SIGN
Northeast	Griffiss Airport	Huntress
Southeast	Tyndall AFB	Oak Grove
Southwest	March ARB	Sierra Pete
Northwest	McChord AFB	Big Foot

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

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

6.44.8. Aircrews will carry COMSEC equipment and documents required to operate the mode 4 on missions when required (see paragraph [6.44.3](#)). Before departing for any destination without COMSEC storage facilities, crews will contact their local COMSEC managers for guidance.

**6.45. Unscheduled Landings.** When an unscheduled landing or crew rest occurs at a base without a passenger facility, the aircraft commander should immediately advise the appropriate CCC and request assistance in arranging substitute airlift for passengers that are aboard. Where necessary, request assistance from the local base commander for transportation, billeting, and meals to accommodate passengers.

**6.46. Maintenance.** Complete the AFTO Form 781 after each flight. After landing, crewmembers debrief maintenance personnel on the condition of the aircraft, engines, avionics equipment, and all installed special equipment as required. At stations without maintenance support, when a maintenance requirement exists the AC will ensure a thorough debrief is provided to the C2 agency, and the MAJCOM Logistics Readiness Center is notified prior to entering crew rest.

**6.47. Border Clearance.**

#### 6.47.1. Normal Operations:

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

6.47.1.2. When staff support is not available, border clearance is the responsibility of the aircraft commander. Duties may be assigned to ground personnel, but the aircraft commander retains ultimate responsibility. When a C-9A aircraft is on-loaded at a base without an air traffic function, the aircraft commander is responsible for ensuring the following:

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

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

6.47.1.2.3. Cargo entry documents are in proper order.

6.47.1.2.4. Departing or entering the United States through an air base where border clearance can be obtained.

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

6.47.1.2.6. Spraying the aircraft (see Foreign Clearance Guide and paragraph 6.47.).

#### 6.47.2. Procedures for US Entry:

6.47.2.1. En route, the 3AET/FA will distribute personal customs declarations (when not accomplished by passenger services) to all passengers, troops, and crewmembers. The 3AET/FA will also brief passengers and crewmembers on customs regulations, and prepare and compile necessary border clearance forms for the aircraft commander's signature.

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

6.47.2.3. Obtain a permit to proceed when military necessities require that an aircraft (which has landed in the United States for customs clearance) proceed to another base in the US 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 issued by a customs official. Do not make intermediate stops between the issue point of the permit to proceed and destination of manifested cargo unless required by an emergency situation or directed by the controlling CCC.

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

6.47.2.5. If the aircraft lands for emergency or temporary reasons, the aircraft commander will ensure no cargo, baggage, personal property, or equipment is removed from the aircraft. Additionally, no passengers or crewmembers will depart the landing place unless removal or departure is necessary for safety or preservation of life and property.

6.47.3. Inspections of US aircraft by foreign officials:

6.47.3.1. US Air Force policy on status of military aircraft is stated in the *Foreign Clearance Guide (FCG)*, General Information (Chapter 3). In substance, this policy holds that US military aircraft are immune from searches, seizures, and inspections (including customs and safety inspections) by foreign officials. In addition, aircraft commanders must be aware of and adhere to any specific Foreign Clearance Guide provisions for individual countries.

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

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

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

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

6.47.3.2.4. If permission is refused and the foreign authorities insist on forcing their way on board an aircraft, the aircraft commander should state that he protests the course of action being pursued and that he intends to notify both US Air Force headquarters and the appropriate American embassy of the foreign action. The aircraft commander should not attempt physical resistance, and should thereafter report the incident to US Air Force headquarters and appropriate embassy as soon as possible. The aircraft commander should escort foreign authorities if the inspection cannot be avoided.

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

## 6.48. Insect and Pest Control.

6.48.1. Responsibility. Aircraft commanders will ensure required spraying is accomplished according to AFI 48-104, *Medical and Agricultural Foreign and Domestic Quarantine Regulations for Vessels, Aircraft, and Other Transports of the Armed Forces (Joint)*, Department of Defense Foreign Clearance Guide, or as directed by higher headquarters. Certify the spraying on CF 7507 (Customs

Form), or on forms provided by the country transited. Aircraft should never be sprayed with passengers on-board except when the Foreign Clearance Guide (FCG) mandates the requirement.

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

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

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

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

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

6.48.1.2. Spray the cabin for 37-seconds, forward cargo compartment for 3-seconds, aft cargo compartment for 2-seconds and wheel wells for 1-second each unless longer periods are specified for the country being transited.

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

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

6.48.3. 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 crewmembers required for block-in duties. Do not on-load or off-load cargo or passengers until the inspection is satisfactorily completed. This procedure may be altered to satisfy mission or local requirements, as arranged by the base air terminal manager or the local C2 organization.

### ***Section 6G—Miscellaneous***

**6.49. Dropped Object Prevention.** If a dropped object is discovered, the flight crew will:

6.49.1. Notify TACC or the controlling agency as soon as practical; include routing, altitude, weather, etc.

6.49.2. Notify maintenance at the first AMC station transited.

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

**6.51. Life Support and Dash 21 Equipment Documentation.** The aircraft commander or designated representative will:

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

6.51.2. Before departing home station and following en route crew changes, review AF Form 4076, **Aircraft Dash 21 Equipment Inventory**, to ensure all required Dash 21 equipment has been certified as installed by maintenance, the initial check has been signed by maintenance, and configuration documents match mission requirements.

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

6.51.4. Missing Equipment. Crewmembers discovering equipment missing will accomplish the following:

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

6.51.4.2. Annotate AF Form 4076 and AFTO Form 46 in the next vacant column indicating the quantity remaining for the item. Ensure the ICAO location designator is entered above the check number of that column. Leave AF Form 4076 and AFTO Form 46 on board the aircraft in the event of an en route crew change.

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

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

6.51.4.5. When possible, advise MAJCOM/DOTL and TACC (or airport management) before mission continuation.

6.51.5. Additional Equipment. If more equipment is discovered during the preflight than is annotated on the AF Form 4076 and AFTO Form 46, annotate the total quantity in the next vacant column for the item. Ensure the ICAO location designator is entered above the check number of that column.

**6.52. No Show Passenger Baggage.** No-show passenger baggage or baggage of passengers removed from flight will be downloaded prior to departure.

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

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

6.53.2. Debrief the next CCC transited.

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

## Chapter 7

### AIRCRAFT SECURITY

**7.1. General.** This chapter provides guidance on aircraft security and preventing and resisting aircraft piracy (hijacking) of C-9A aircraft. AFI 13-207, *Preventing and Resisting Aircraft Piracy (Hijacking)*, AFI 31-101V1, *Air Force Physical Security Program*, and specific MAJCOM security publications contain additional guidance. Aircrews will not release information concerning hijacking attempts or identify armed crewmembers or missions to the public.

**7.2. Security.** The aircraft commander will ensure adequate security of the aircraft is provided at all times. At AMC bases, the C-9A is treated as a priority "C" resource. Other MAJCOMs treat the C-9A as a mission support aircraft. Aircraft security at non-United States military installations is the responsibility of the controlling agency.

**7.3. Air Force Physical Security Program.** When required, aircraft commanders will receive a threat assessment and security evaluation briefing at home station and receive updates at en route CCCs. The following security procedures implement AFI 31-101, *The Air Force Physical Security Program*, requirements for C-9A aircraft:

7.3.1. At AMC bases, the aircraft will be parked in an established restricted area and afforded protection via a roving patrol and a two-person armed response capability within 5 minutes.

7.3.1.1. When no permanent or established restricted area parking space is available, establish a temporary restricted area consisting of a raised rope barrier, and post with restricted area signs. Provide a one-person mobile patrol, supported by a two-person security response team capable of 5 minute response. Portable security lighting will be provided during the hours of darkness if sufficient permanent lighting is not available.

7.3.2. At non-AMC United States military installations, the C-9 is treated as a mission support aircraft and may or may not be parked in a restricted area, depending on service directives.

7.3.3. At non-United States military installations, the aircraft commander determines the adequacy of local security capabilities to provide aircraft security commensurate with this chapter. If he or she determines security to be inadequate, the aircraft will depart to a station where adequate security is available.

**7.4. En Route Security.** The planning agency must coordinate with the execution agency to ensure adequate en route security is available. Aircraft commanders will receive a threat assessment and en route security capability evaluation briefing for areas of intended operation prior to home station departure and should request updates from en route CCC as required. If required, PHOENIX RAVEN team will be assigned to the mission for security.

7.4.1. The PHOENIX RAVEN team will consist of 2 US Air Force security force members, but may include more depending on security requirements. The team is responsible to the aircraft commander at all times. In turn, aircraft commanders are responsible for their welfare (transportation, lodging, etc.). Aircraft commanders will ensure security team members receive a full aircrew briefing.

7.4.2. Arrival. On arrival, the aircraft commander will assess the local situation and take the following actions as required:

7.4.2.1. Area patrol. Request area security patrols from local security forces. If local authorities request payment for this service, use AF Form 15, **United States Air Force Invoice**.

7.4.2.2. Aircrew surveillance. During short ground times, direct armed crewmembers to remain with the aircraft and maintain surveillance of aircraft entrances and activities in the aircraft vicinity.

7.4.2.3. Inadequate security. If in the aircraft commander's opinion airfield security is inadequate and the safety of the aircraft is in question, he/she may waive the flight duty period limits and crew rest requirements and depart as soon as possible for a base 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 entire crew leave the aircraft unattended. Crew rest requirements will be subordinate to aircraft security when the airframe may be at risk. The aircraft commander 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, US Embassy, local military or law enforcement agencies as appropriate.

7.4.3. Entry Control Procedures. Unescorted entry is granted to crewmembers and support personnel assigned to the mission who possess their home station AF Form 1199, **Air Force Entry Control Card**, supported by an entry access list (EAL) or aircrew orders. Crewmembers and assigned crew chiefs are authorized escort authority.

7.4.3.1. Normally, non-United States nationals such as cargo handlers can perform their duties under escort and should not be placed on the EAL.

7.4.3.2. Personnel not qualified in paragraph 3.1. above must be escorted within the area.

## 7.5. Detecting Unauthorized Entry.

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

7.5.1.1. Secure the doors in a manner that will indicate unauthorized entry (e.g. tape inside of doors, clearview windows, and overwing hatches to airframe so that entry pulls tape loose).

7.5.1.2. Exit aircraft through aft stairs. Close and lock the stairs.

7.5.1.3. Report any unauthorized entry or tampering to the OSI, security forces or local authorities, and the CCC agency. Have aircraft thoroughly inspected prior to flight.

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

## 7.6. Preventing and Resisting Hijacking.

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

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

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

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

7.6.5. A concerted effort must be made to prevent the hijacking of military or military contract aircraft by detecting potential hijackers before they board the aircraft.

7.6.6. Should preventive efforts fail, any actual attempt to hijack a military aircraft must be resisted in a manner appropriate to the situation.

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

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

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

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

**7.7. Preventive Measures.** Commanders at all levels must ensure preventive measures are taken to minimize access to the aircraft by potential hijackers. When a C-9A is operating away from home station, the aircraft commander will ensure provisions of this chapter and AFI 31-207, as supplemented, are complied with.

7.7.1. Preventive measures include the following: The host station passenger processing or manifesting facility should conduct anti-hijacking inspections. Do not board passengers until the aircraft commander is fully satisfied with inspection results. In the absence of qualified passenger service representatives, the aircraft commander will ensure the anti-hijacking inspection of passengers and baggage is accomplished.

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

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

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

7.7.4.1. Move to a safe, clear area at least 50-feet from any aircraft, equipment, or personnel before unholstering or unslinging their weapons.

7.7.4.2. Clear weapons in accordance with standard safety procedures.

**7.8. Initial Response.** When an act of air piracy involves an Air Force installation or aircraft within the United States, response will be according to the following procedures until such time as FAA assumes active direction of anti-hijacking efforts. Resist all attempts to hijack a military aircraft. Resistance may vary from simple dissuasion, through deception and subterfuge, to direct physical confrontation, including the prudent use of weapons.

7.8.1. The following procedures should be used to counter a hijacking, actual or threatened, while the aircraft is on the ground:

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

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

7.8.1.2.1. MAJCOM commander exercising operational control of the aircraft.

7.8.1.2.2. MAJCOM commanders in whose area of responsibility (AOR) the airfield lies.

7.8.1.2.3. Senior operational commander on scene.

7.8.1.2.4. Aircraft commander when specified in MAJCOM instruction.

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

7.9.1. Engage the hijackers in conversation to calm him or her and to evaluate what course of action might be effective.

7.9.2. Dissuade the hijacker.

7.9.3. Use facts or subterfuge to convince the hijacker intermediate stops are necessary.

7.9.4. Propose more favorable alternatives, such as landing in a neutral, rather than a hostile, country.

7.9.5. Exploit any reasonable opportunity to incapacitate or overcome the hijacker physically, including the prudent use of firearms.

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

7.10.1. If possible, transmit an in-the-clear notification of hijacking to ATC. Controllers will assign IFF code 7500 (does not preclude subsequent selection of code 7700).

7.10.2. If in-the-clear transmissions are not possible, report "am being hijacked" by setting transponder to code 7500. If unable to change transponder code, or when not under radar control, transmit a radio message to include the phrase "(call sign) transponder seven five zero zero."

7.10.3. Controllers will acknowledge receipt and understanding of transponder code 7500 by transmitting "(call sign) (facility name) verify squawking 7500." An affirmative reply or lack of reply from the pilot indicates confirmation and proper authorities are notified.

7.10.4. To report "situation appears desperate; want armed intervention," after code 7500 is used, change to code 7700. If unable to change transponder code to 7700, or when not under radar control, transmit "(aircraft call sign) transponder seven seven zero zero."

7.10.4.1. When changing from code 7500 to code 7700, remain on 7500 for at least 3 minutes or until a confirmation of code 7500 is received from ATC, whichever is sooner, before changing to code 7700. ATC acknowledges code 7700 by transmitting "(call sign) (facility name) now reading you on transponder seven seven zero zero."

7.10.4.2. Aircraft squawking 7700 after squawking 7500, which are not in radio contact with ATC, are considered by ATC to have an in-flight emergency (in addition to hijacking), and the appropriate emergency procedures are followed. Notification of authorities in this case includes information that the aircraft displayed the hijack code as well as the emergency code.

7.10.5. To report "situation still desperate, want armed intervention and aircraft immobilized", leave flaps and slats full down (50 degrees/LAND) after landing, or select flaps 50 degrees while on the ground. To facilitate message distribution, transmit "(aircraft call sign) flaps are full down."

7.10.6. To report "leave alone, do not intervene," retract the flaps/slats after landing. Pilots who retract flaps and slats after squawking 7700 should return to code 7500 and remain on code 7500 for the next leg of the hijacked flight unless the situation changes. Transmit "(call sign) back on seven five zero zero" to emphasize the fact intervention is no longer desired.

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

7.11.1. If instructions from the unfriendly nation are received either by radio contact or by air intercept before boundary crossing, comply with instructions received.

7.11.2. If no contact with unfriendly nation is made before approaching a boundary:

7.11.2.1. Maintain TAS not more than 400-knots.

7.11.2.2. Maintain an altitude between 10,000 and 25,000-feet, if possible.

7.11.2.3. Fly a direct course toward destination announced by the hijacker, if no course is specified.

7.11.2.4. Transmit the international distress signal, MAYDAY, on any of the international distress frequencies (121.5 MHz, 243.0 MHz, or 2182 KHz) in an effort to establish communications.

7.11.2.5. Set mode 3 code 7700 on transponder.

7.11.2.6. If radio contact cannot be established, follow procedures set forth in FLIP.

7.11.3. Consider the presence of classified documents and equipment aboard the aircraft. When a landing in an unfriendly nation is imminent, attempt to dispose of or destroy the equipment or material.

**7.12. Arming of Crewmembers.** When weapons are required, crews will be advised by mission tasking, OPORD, or CCC. Normally the co-pilot will be armed. All crewmembers should know who is armed.

7.12.1. Issue. Before departing home station, obtain weapons, and ammunition. Crewmembers will be armed according to AFI 31-207 and MAJCOM supplement. If an armed crewmember must leave the crew en route, transfer the weapon to another authorized crewmember using **AF Form 1297, Temporary Issue Receipt**.

7.12.2. Wearing of Weapons. Wear weapons in a holster, concealed at all times to prevent identifying armed crewmembers. Do not wear weapons off the flight line except to and from the CCC, armories, and other facilities associated with aircrew activities.

7.12.3. Weapons Storage In-Flight. Crewmembers will be armed before beginning preflight, on-load or off-load duties and until completion of all post-flight duties. When no passengers are aboard, weapons may be stored in the gun box in-flight after a satisfactory stowaway check. Crewmembers will rearm before landing. Weapons need not be unloaded before placing them in a gun box.

7.12.4. Crew Rest.

7.12.4.1. Aircrews, will store weapons and ammunition in the most secure facility available, normally the base armory.

7.12.4.2. When an armory is unavailable, aircrews may store weapons and ammunition in the aircraft gun box.

7.12.5. When storing weapons in the gun box:

7.12.5.1. Weapons should not normally be unloaded.

7.12.5.2. Advise CCC as to which crewmember has the gun box key.

7.12.6. Crewmembers will ensure they are reissued the same weapon until mission termination at home station.

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

**7.13. Force Protection.** Crews must be alert to the possibility of terrorist activities at all times. The following considerations may help crewmembers avoid becoming victims of terrorism when operating in overseas locations:

7.13.1. Personal Conduct. Crews must realize their conduct can make them a target for individuals dissatisfied with US foreign involvement in their national affairs. Local foreign nationals may or may not condone a military presence - crew conduct will be watched and judged. Therefore, utilize the following:

7.13.1.1. Maintain good military bearing both on and off duty.

7.13.1.2. Avoid dressing in clothes that highlight the fact you are an American, i.e. cowboy hats, wide belt buckles, shirts with pro-American slogans, etc.

7.13.1.3. Do not wear clothing displaying profanity.

7.13.1.4. Know where "off limits" areas are and avoid them.

7.13.1.5. When possible, always travel in groups of two or more.

7.13.1.6. Avoid demonstrations for any cause.

7.13.1.7. Avoid discussion of politics.

7.13.2. Ground transportation security. When traveling to and from billeting, messing facilities, etc. consider the following to minimize drawing attention to yourself as a potential target:

7.13.2.1. Select a plain car; minimize the "rich American" look.

7.13.2.2. If possible, consider not using a car that announces Government ownership.

7.13.2.3. Keep the gas tank at least half full at all times.

7.13.2.4. Do a thorough check of the car to look for signs of tampering - look at undercarriage and wheel-wells.

7.13.2.5. Park in well-lighted areas, preferably under US control.

7.13.2.6. Always lock your car. If possible, do not leave it on the street overnight.

7.13.2.7. Only leave the ignition key with parking attendants.

7.13.2.8. Before entering vehicles, check for suspicious objects. Look underneath vehicle seats.

7.13.2.9. Guard against establishing a routine. Vary times, routes, and modes of travel. Avoid late night travel.

7.13.2.10. Travel with companions or in convoys when possible.

7.13.2.11. Avoid isolated roads and dark alleys.

7.13.2.12. Ride with seat belts buckled, doors locked, and windows closed.

7.13.2.13. Do not allow the vehicle to be boxed in. Maintain enough interval between you and the vehicle in front so that you can pass.

7.13.2.14. Circle the block for confirmation of surveillance.

7.13.2.15. Do not stop or take other actions which could lead to a confrontation.

7.13.2.16. Recognize events that could signal the start of an attack, such as:

7.13.2.16.1. Cyclist falling in front of your car.

7.13.2.16.2. Flagman or workman stopping your car.

- 7.13.2.16.3. Fake police or government checkpoints.
- 7.13.2.16.4. Disabled vehicle/accident victims on the road.
- 7.13.2.16.5. Unusual detours.
- 7.13.2.16.6. An accident in which your car is struck.
- 7.13.2.16.7. Cars or pedestrian traffic that box you in.
- 7.13.2.16.8. Sudden activity or gunfire.
- 7.13.2.17. Know what to do if you are under attack:
  - 7.13.2.17.1. Consider sounding the horn.
  - 7.13.2.17.2. Put another vehicle between you and your pursuer.
  - 7.13.2.17.3. Execute an immediate turn and escape, jump curbs at a 30-45 degree angle, 35 mph minimum.
  - 7.13.2.17.4. Ram a blocking vehicle only as a last resort.
  - 7.13.2.17.5. Go to the closest safe haven.
  - 7.13.2.17.6. Report the incident to security police.
- 7.13.3. Personal Identification. Consider the following actions to avoid advertising the fact you are an American:
  - 7.13.3.1. Don't discuss your military affiliation with strangers.
  - 7.13.3.2. Avoid military style luggage such as B-4 bags & duffel bags with military logos, etc.
  - 7.13.3.3. Consider placing your official passport and related documents such as military ID, flight orders, club card, dog tags, billeting receipts in your hand-carried luggage and not in your wallet or purse.
  - 7.13.3.4. Wear conservative styled civilian clothing when using commercial transportation.
  - 7.13.3.5. Remember, the key is to maintain a low profile.
- 7.13.4. Hotel Security. When billeted in commercial hotels, crews need to be aware of the following:
  - 7.13.4.1. If possible, obtain rooms between the second and sixth floors. These rooms are high enough to be less vulnerable to unauthorized entry from the outside and low enough to simplify evacuation if necessary.
  - 7.13.4.2. Always lock interior locks when occupying rooms.
  - 7.13.4.3. Always assume your room is monitored and avoid viewing or discussing classified material.
  - 7.13.4.4. Avoid establishing a predictable routine i.e., vary eating times and locations.
  - 7.13.4.5. Avoid traveling on foot--use a vehicle (hotel shuttle, commercial taxi, etc).
  - 7.13.4.6. In high threat areas, stay off the streets (use hotel dining facilities if available).

**7.14. Protecting Classified Material on Aircraft.** The Aircraft Commander is responsible for protection of classified materials aboard their aircraft. See requirements in AFI 31-401, *Information Security Program Management*. As a minimum, ensure the IFF equipment is set to zero before leaving the aircraft.

## Chapter 8

### OPERATIONAL REPORTS AND FORMS

**8.1. General.** Applicable reports and forms are contained in this chapter.

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

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

8.2.2. Special Procedures for Hazard Reports Concerning Weather. Complete the front of an AF Form 457 and address it to the parent wing flying safety office. If a computer flight plan deficiency is involved, attach one copy of the AF Form 72, **Air Report (AIREP)** (e.g. AF Form 4113, **Flight Plan and Record**, or AF Form 4053, **INS Flight Plan and Log**, and the computer flight plan (CFP) to the report. Send the report so that the parent unit receives it within 5 days.

**8.3. AF Form 651, Hazardous Air Traffic Report (HATR). RCS: 11AF-SE(AR)760.** Use AFI 91-202 and the following:

8.3.1. The Air Force HATR program provides a means for personnel to report all near midair collisions and alleged hazardous air traffic conditions.

8.3.2. Procedures:

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

8.3.2.1.1. Call sign

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

8.3.2.1.3. Altitude or flight level

8.3.2.1.4. Description of the other aircraft

8.3.2.1.5. Statement that a written HATR report will be filed upon landing

**NOTE:** FAA must know if an official report is being filed.

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

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

- 8.3.3.1. Violation was inadvertent, i.e. not deliberate
- 8.3.3.2. No mishap occurred
- 8.3.3.3. No criminal offense was intended or committed
- 8.3.3.4. The individual reported the incident according to paragraph 8.3.2.

#### 8.4. AF Form 711, USAF Mishap Report. (N/A AFRC)

- 8.4.1. Responsibilities. Notify the appropriate authorities of any mishap involving aircraft or crew.
- 8.4.2. Reportable Mishaps. Report damage to the aircraft or injury to the crew or passengers. In addition, any damage or injury to another organization's equipment or personnel resulting from the movements or actions of an aircraft or crew. Reportable mishaps include:

- 8.4.2.1. Physiological mishaps.
- 8.4.2.2. Engine flameout, failure, or required shutdown, after engine start with intent for flight, regardless of damage.

**NOTE:** Intentional shutdowns for training, FCF, or other non-emergency purposes are excluded; however, report failure to restart, using the criteria above.

- 8.4.2.3. Loss of thrust sufficient to preclude maintaining level flight at a safe altitude.
- 8.4.2.4. Engine case penetration by shrapnel from internal engine component failure.
- 8.4.2.5. Engine case rupture or burn-through, engine bay fire, or massive fuel leakage.
- 8.4.2.6. Unselected thrust reversal.
- 8.4.2.7. Flight control malfunction (including AFCS and trim systems) resulting in an unexpected, hazardous change of flight attitude, altitude, or heading. When making the AFTO 781A, **Maintenance Discrepancy and Work Document**, entry, include the flag words "reportable flight control malfunction."
- 8.4.2.8. Malfunction of landing gear when difficulty is experienced using emergency system or procedures.
- 8.4.2.9. In-flight loss of all pitot-static instrument indications or all gyro-stabilized attitude or directional indications.
- 8.4.2.10. Spillage or leakage of toxic, material from aircraft stores or cargo that, in the judgment of the reporting individual, is significant hazard to the crew, passengers, or aircraft.
- 8.4.2.11. Human factors related situation, e.g. misinterpretation of instruments; crew overload, i.e. tactile, aural, and visual input to the crew at a rate too fast to permit reasonable decisions based on the data received; or too many actions required in too short a period of time; or confusion of controls such as would be caused by adjacent switches where the actuation of the wrong switch could create a dangerous situation. Anonymous reports of such situations are acceptable.
- 8.4.2.12. All cases of departure from intended takeoff or landing surface onto a surface not designed to normally support takeoff or landing loads.
- 8.4.2.13. All in-flight fires regardless of damage.

8.4.2.14. Any occurrence which does not meet the established criteria for a reportable mishap but, in the judgment of the reporting individual, needs to be emphasized in the interest of safety.

8.4.3. Procedures. Report mishaps as soon as possible to the following offices using the following precedence:

8.4.3.1. MAJCOM flying safety officer (FSO)

8.4.3.2. Any FSO

8.4.3.3. Nearest CCC

8.4.3.4. Base operations

8.4.4. In all cases, retain a copy of all relevant information, and turn it into a home station safety officer.

8.4.5. Required Information. Complete all appropriate areas of the form. Provide as much detail as possible.

**8.5. Reports of Violations/Unusual Events or Circumstances.** Violations identified in AFI 11-202V3 alleged navigation errors (including over-water position errors exceeding 24 NMs, border and air traffic control violations) will be reported.

8.5.1. Use the following format and include:

8.5.1.1. Factual circumstances

8.5.1.2. Investigation and analysis

8.5.1.3. Findings and conclusions

8.5.1.4. Recommendations

8.5.1.5. Actions taken

8.5.2. Attachments to include:

8.5.2.1. Notification of incident

8.5.2.2. Crew orders

8.5.2.3. Statement of crewmembers (if applicable)

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

8.5.3. In addition to the information listed, the historical flight plan will be downloaded onto a floppy disk and turned in to the command and control facility or owning standardization and evaluation office.

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

8.5.5. The following OPREP-3 reporting procedures for all aircraft notified of navigational errors exceeding 24 NMs will be reported under AFMAN 10-206, *Operational Reporting*.

8.5.5.1. On notification of a navigational position error, the aircraft commander (or agency receiving notification) documents the circumstances surrounding the incident (report content below) and ensures submission of an OPREP-3 report through CCC channels.

8.5.5.2. Report content:

8.5.5.2.1. Name and location of unit submitting report

8.5.5.2.2. Mission identification number

8.5.5.2.3. Reference to related OPREPs-3

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

8.5.5.2.5. Date, time (Zulu), and location (i.e. ARTCC area)

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

8.5.6. Aircraft commanders must keep MAJCOM C2 agencies apprised of any unusual events or circumstances impacting their mission. Examples of reportable events include meaconing, jamming, intrusion, interception, fuel dumping, loss of multiple engines, hostile fire, injury to passengers or crewmembers, etc. This list is not exhaustive. Some events may require C2 agencies to forward OPREP reports to higher headquarters. The old adage, "when in doubt, report it," applies.

**8.6. Petroleum, Oil, and Lubricants (POL)/Fuels Documentation.** This section describes procedures for the aviation fuel program (AVPOL) for all USAF aircraft. Procedures are established for correct documentation, processing of forms and invoices, program oversight, and personnel responsibilities. Reference AFI 23-202, *Buying Petroleum Products, and Other Supplies and Services Off-Station*, AMC decentralization procedures, and AFMAN 23-110, Volume 2, Part 3. An Into-Plane contract information and Aviation Into-Plane Reimbursement (AIR) card acceptor list is available under the air card section on www page (see address below).

**NOTE: Aviation Into-Plane Reimbursement (AIR) Card.** The AIRcard is a commercial credit card which allows aircrews to purchase aviation fuel, fuel related supplies, and/or ground services at commercial airports where no DoD/Canadian into-plane contracts exist. Accepted at over 4200 locations, it is intended to replace the AF Form 315, United States Air Force AVFuels Invoice and AF Form 15, United States Air Force Invoice, at locations that accept the AIR card. All Air Force aircraft will be issued an AIR card. Additional information is available at SF WEB page:

(<http://www.kelly.af.mil/sfweb/aircard.htm>).

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

8.6.2. Aircraft will be refueled or de-fueled at DoD locations unless DoD-owned fuel is not available; in which case, fuel may be procured from other sources using the following priority.

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

8.6.2.2. Foreign government air forces

8.6.2.3. Open market AIR card purchase, to include Shell International Trading Company (SITCO) agreement.

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

#### 8.6.3. AVPOL Documentation Use and Procedures.

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

**NOTE:** When logging in-flight on-load transactions on the AF Form 664, place the 8-digit tail number of the tanker in the block titled "Airfield Name," and the unit number and home station in the block titled "Airfield Address."

8.6.3.2. The AIRcard will be used to purchase aviation fuel, fuel related supplies, and ground services at commercial airports where DoD or Canadian Into-Plane contracts do not exist. Tickets for AIR card purchases will be recorded and placed inside the AF Form 664.

8.6.3.3. AF Form 315, **United States Air Force AVFuels Invoice**-- Use this form to purchase fuel at non-DoD and Canadian Into-Plane contract locations and when the vendor will not accept the Air card. See AFI 23-202, *Buying Petroleum and Other Supplies and Services Off-Station*. Block 4 (Send Bill To) address on the AF Form 315 must reflect the following address: SA ALC/SFR, 1014 Billy Mitchell Blvd, STE 1, Kelly AFB TX 78241-5603. When completed, log and place inside the AF Form 664.

**NOTE:** Vendor must submit original copy of completed AF Form 315 with their invoice to the address indicated in Block 4 for payment. Contrary to what is printed in Block 16 of AF Form 315, the vendor will not be paid until they initiate billing to SA-ALC/SFR.

8.6.3.4. AF Form 15, **United States Air Force Invoice**. This form is used for procurement of items or services required at commercial locations where normal DOD support and supplies are not available. If the vendor will not accept the AIR card, use AF Form 15 to pay for ground fuels, oils, or services. Block 4 (Send Bill To) of the AF Form 15 must reflect the address of the home-station supporting DFAS-OPLOC. When completed, log and place inside AF Form 664. The accomplished form is returned to the aircraft's home station for payment. The responsible resource advisor must validate and certify the completed AF Form 15 and forward to the supporting DFAS-OPLOC for payment. See AFI 23-202.

8.6.3.4.1. Provide the original and one legible copy of the AF Form 315 or 15 to the vendor. The vendor must submit the original copy of the AF Form 315/15 to the address identified in Block 4 of these forms for payment. A legible copy of the AF Form 315/15 must be obtained by the aircraft commander, then logged and placed inside the AF Form 664.

8.6.3.4.2. Purchases at Canadian into-plane locations will be documented using the local vendor's invoice. AF Form 15 or 315 will not be accomplished. Hand scribe the information from the aircraft identa-plate to the vendor's invoice, and complete a separate sheet with the information listed on the Aviation Issues to DoD and Non-DoD, Aircraft Refueling Tender Sheet. See AFI 23-202. Log and place a copy inside the AF Form 664.

8.6.3.4.3. Purchases at SITCO Agreement locations require presenting the aircraft identification plate (DD Form 1896). The invoice must include the date of transaction, grade of the product, quantity issued or de-fueled, unit of measure, and signature of the Air Force representative. If the vendor also requires completion of an AF Form 15 or AF Form 315 in addition to their invoice, annotate on the vendor's invoice "AF FORMS EXECUTED." Log and place the documentation inside the AF Form 664, **Aircraft Fuels Documentation Log**.

8.6.3.4.4. Purchases at non-contract (DoD/Canadian Into-Plane) commercial airports will be accomplished using the AIR card or the AF Form 315 and/or AF Form 15 when vendor does not accept the AIR card. Refer to AFI 23-202 for procedures on completing these forms.

8.6.3.4.5. Purchases at foreign military airfields, including replacement-in-kind (RIK) locations, the host country forms are used to record the purchase. Information from the aircraft identification plate should be hand scribed on the local form. Log and place a copy inside the AF Form 664.

8.6.3.4.6. If an embassy arranges fuel support and pays the vendor in cash, an AF Form 315 must be completed with the addition of the statement in Block 11: "paid by US Embassy". Also include in Block 11, the date, POC, and telephone number of responsible embassy employee. When completed, attach vendor ticket, then log and place inside AF Form 664.

**NOTE:** In this situation, do not leave a copy of the AF Form 315 with the vendor. Base wing refueling document control officers will forward AF Form 315 to SA-ALC/SFR.

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

8.6.5. AFTO Form 781H, **Aerospace Vehicle Flight Status and Maintenance Document**. Complete form per applicable technical directives. When removed from jacket, turn in to maintenance. Maintenance will retain for 90 days after inter-fund billing to provide a secondary audit trail for fuels issue and flying hours.

8.6.6. DD Form 1896, **Jet Fuel Identification Plate**, aircraft fuel and oil charge card.

8.6.7. DD Form 1898, **AVFuels Into-Plane Sales Slip**, fuel transaction receipt is used for purchases at other DoD locations, including DFSC into-plane contract locations. Log and place inside AF Form 664.

**NOTE:** If the contractor insists on completing their own invoice in addition to the DD Form 1898, the invoice must be annotated "DUPLICATE DD FORM 1898 ACCOMPLISHED."

**8.7. AMC Form 54, Aircraft Commanders Report on Services/Facilities.** This is an instrument for aircrews to report that services rendered or conditions encountered were unsatisfactory or detrimental to efficient air mobility operations; services rendered or procedures used are worthy of adoption for all MAJCOM organizations; or a performance rendered by a person (or persons) was commendable and deserves recognition. Attempt to solve problems by contacting appropriate supervisors including the senior commander if conditions and situations warrant. If further action is deemed necessary or the problem requires increased visibility, submit this form.

8.7.1. Submit the form to the originator's squadron commander. Time permitting, leave an information copy with the CP or senior AMC representative on station. Forward an information copy to HQ

AMC/DOV and AMC NAF/DO. See AMCI 11-208, *Tanker/Airlift Operations*, for processing information.

**8.8. AMC Form 43, AMC Transient Aircrew Comments.** Any crewmember may submit this form. The report may be submitted whether or not an unsatisfactory item is included in the aircraft commander's trip report. Complete AMC Form 43 and send to HQ AMC/MWPS.

**8.9. AMC Form 196, Aircraft Commander's Report on Crewmember.** The aircraft commander will prepare an AMC Form 196 on each crewmember whose performance was outstanding, below average, or unsatisfactory during a mission. Send the report to the commander of the unit to which the crewmember is assigned or attached for flying. Form should fully explain outstanding, below average, and unsatisfactory performance.

**8.10. AMC Form 423, MIJI (Meaconing, Intrusion, Jamming, Interference) Incident Report Worksheet.**

8.10.1. Purpose. The MIJI reporting system is a program to identify, analyze, and disseminate information concerning MIJI incidents.

8.10.2. Procedures. Comply with Air Force headquarters direction by reporting all incidents through the OPREP (operations reporting) system. Complete the MIJI Incident Report Worksheet, and turn in to base operations upon landing.

## Chapter 9

### TRAINING POLICY

**9.1. Qualification Training.** This chapter outlines procedures, requirements, and restrictions for qualification, continuation training, and evaluation flights. Initial qualification, re-qualification, or upgrade training for pilots will not be conducted on missions with passengers onboard. Mission qualification training may be conducted on missions with passengers onboard only if the individual in training is qualified (completed aircraft checkride with a valid AF Form 8).

9.1.1. Minimum Crew Complement. See [Table 3.1.](#) or [Table 3.2.](#)

9.1.2. Crew Qualification. Both pilots must be current and qualified or one pilot must be a current and qualified instructor or evaluator.

9.1.3. Crew Duty Time. See paragraph [3.6.9.](#)

9.1.4. Training Aircraft Not Capable of Flight. If an aircraft is not in commission or otherwise capable of departure within 4-hours after scheduled departure time, the aircraft commander will determine whether the training mission should be canceled.

9.1.5. Civilian employees under direct contract to the DoD, engaged in official direct mission support activities, are considered mission essential and may be onboard when touch-and-go landings are performed.

**9.2. Instructor Pilot Briefing.** Before all training and evaluation missions, instructors and evaluators will brief their crews on all aspects of the mission in accordance with locally-developed briefing guides. These guides will be approved by OG Stan/Eval.

**9.3. Debriefing.** Following the mission, review and evaluate overall training performed. Each student must understand thoroughly what training has been accomplished and what maneuvers, if any, require further training. Following the debriefing, ensure all training is documented on applicable forms.

#### **9.4. Simulated Emergency Flight Procedures.**

9.4.1. When practicing simulated emergencies, use a realistic approach and do not compound emergencies.

9.4.2. Practice simulated emergencies only during training, evaluation, or currency flights when an instructor or evaluator pilot is occupying one of the pilot seats. Instructor and evaluator pilot candidates who are under the supervision of a evaluator pilot not in a pilot seat may practice simulated emergency procedures during initial and requalification instructor or evaluator pilot upgrade evaluations.

9.4.3. Notify the controlling agency if the simulated emergency will require a nonstandard pattern or special handling.

9.4.4. Weather:

9.4.4.1. Simulated single-engine maneuvers, no-slat approaches, and no-flap approaches are not authorized at night or in IMC.

9.4.4.2. Other simulated emergencies are limited to non-critical phases of flight and will be kept to a minimum during night or IMC.

9.4.5. Passengers are prohibited on training, evaluation, or currency flights when simulated emergency maneuvers are to be practiced. **Note:** Do not perform simulated emergencies unless all AECMs are seated with seat belts fastened. There are no other restrictions with AECMs during designated training flights.

**9.5. Prohibited Maneuvers.** The following maneuvers are confined to the simulator:

- 9.5.1. Full stalls.
- 9.5.2. Unusual attitudes.
- 9.5.3. Aborted takeoffs.
- 9.5.4. Simulated emergency descents.
- 9.5.5. No-flap landings.
- 9.5.6. No-slat landings.
- 9.5.7. Simulated jammed stabilizer approach and landing.
- 9.5.8. Simulated runaway pitch trim.
- 9.5.9. Intentional Dutch Roll

**9.6. Touch and Go Landing Limitations.** Current and qualified instructor, evaluator and SQ/CC certified aircraft commanders are authorized to conduct/supervise touch and go landings. Touch and go landings will only be accomplished on designated training, evaluation, or currency missions. Observe the following limitations:

- 9.6.1. Minimum reported ceiling and visibility values are 300-3/4 (RVR 4000), (1000-3 for certified ACs).
- 9.6.2. Minimum RCR is 12.
- 9.6.3. Minimum runway length is 7,000-feet.
- 9.6.4. Touch and go landings are prohibited when jumbo jets (e.g., B-747, C-5, etc.) are operating in the VFR traffic pattern.
- 9.6.5. Touch and go landings may be performed by instructor pilots, instructor pilot candidates on initial or requalification instructor pilot evaluations, or evaluator pilots from either seat.
- 9.6.6. Touch and go landings may be performed by any pilot from either seat provided an instructor pilot, instructor pilot candidate on initial or requalification instructor evaluation, or an evaluator pilot is in the other seat.
- 9.6.7. Touch and go landings may be performed with AECM personnel on board provided the mission is a designated training flight. Touch and go landings are not authorized when passengers are onboard.
- 9.6.8. Maximum crosswind component is 30-knots (15-knots for certified ACs).
- 9.6.9. No performance degrades i.e. reduced EPR (SQ/CC certified ACs only)

9.6.10. SQ/CC certified ACs will not conduct simulated emergencies.

9.6.11. AC touch and go certification:

9.6.11.1. ACs must have accumulated a minimum of 100-hours since AC qualification prior to touch and go certification.

9.6.11.2. The SQ/CC determines touch and go certification requirements for ACs.

9.6.11.3. Separate SQ/CC certifications are required for ACs to: Accomplish their own touch and gos and supervise other pilots' touch and gos.

9.6.11.4. Certification will be documented by the SQ/CC using the AF Form 1381 in the individual's FEF.

**9.7. Training Restrictions.** Observe the following restrictions on all C-9A training flights:

9.7.1. Copilots will not accomplish simulated engine-out maneuvers, no-flap approaches, or no-slat approaches until designated by the squadron commander as an Aircraft Commander candidate. By definition, Flight-Qualified Aircraft Commanders (FP) and FP candidates are not restricted.

9.7.2. Initiate all simulated emergencies on takeoff above 500-feet AGL.

9.7.3. Simulated engine failures are not authorized below safe single-engine minimum control speeds or when any actual emergency exists.

9.7.4. One actual engine shutdown and relight may only be accomplished in the aircraft to satisfy FCF requirements and during AC or IP upgrade training. This is limited to day VMC at or above 5,000-feet AGL.

9.7.5. Landings may be performed with one engine retarded to idle. The throttle must have been placed in idle at or above 500-feet AGL.

9.7.6. One throttle may be in idle provided go-around or missed approach is initiated prior to reaching 500-feet AGL. During instructor pilot upgrade training and recurring instructor evaluations, descent to 300-feet AGL is authorized provided both engines are used for the go-around maneuver.

9.7.7. Initiate practice missed approaches no lower than the published MDA or DH for the approach flown.

9.7.8. Minimum altitude for low approaches with men or equipment on the runway is 500-feet AGL.

9.7.9. Initiate go-arounds no lower than 100-feet above the runway when practicing simulated system emergencies other than simulated engine failures.

**9.8. Category II ILS Approaches.** Maximum crosswind for practice is 15-knots. Minimum ceiling and visibility is 200-1/2 (RVR 2400).

**9.9. Special Maneuvers.** Training maneuvers not included in the flight manual are [Table 9.1](#) through [Table 9.5](#).

9.9.1. Airwork. Slow flight, approach to stalls (stick shaker and maximum performance maneuver), and flight on the back side of the power curve will be conducted at a minimum of 10,000-feet AGL in day VMC. Approach to stalls (stick shaker and maximum performance maneuver) may only be performed in the aircraft on actual FCFs and during FCF training in conjunction with IP upgrade.

9.9.2. Demonstrations. Steep turns (not to exceed 45-degrees of bank), the rate of roll demonstration, and the high sink rate demonstration may be performed at a minimum of 5,000-feet AGL in day VMC.

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

**Table 9.1. High Sink Rate.**

***Demonstrates:***

1. Loss of altitude after initiation of a recovery from a high sink approach with engines at idle.
2. Time required for engines to produce flight takeoff thrust from spool down conditions.
3. Amount of body angle rotation necessary to arrest sink.
4. The maximum performance maneuver may also be used for the recovery, but the normal go-around from idle thrust will provide the most graphic demonstration of spool-up time and potential for altitude loss.

***Procedures:***

1. Minimum altitude 5,000 feet AGL, during entire maneuver.
2. Set airspeed marker at Vref.
3. Set EPR markers to go around EPR.
4. Set FLT DIR to GA mode.
5. Slats extended, flaps 50 degrees, gear down.
6. Throttles idle, slow to Vref+5.
7. Establish rate of descent to maintain Vref+5 (approx. 1500 fpm).
8. Initiate recovery at given altitude using normal go-around procedures.
  - Set go-around EPR.
  - Rotate to maintain Vref+10.
  - Note altitude lost during recovery go-around.
  - Note time for spool up of engines to go-around EPR.

**Table 9.2. Stick Shaker/Maximum Performance Maneuver.**

<p><b>Purpose:</b> Demonstrates aircraft characteristics at stick shaker speed and recovery characteristics of aircraft.</p> <p><b>Procedures:</b></p> <ol style="list-style-type: none"> <li>1. Determine stick shaker speed (sec VI).</li> <li>2. Minimum altitude 10,000 feet AGL.</li> <li>3. Engine ignition GND START and CONT.</li> <li>4. Hydraulic pumps high.</li> <li>5. Set airspeed marker at Vref.</li> <li>6. EPR marker go-around EPR.</li> <li>7. Set FLT DIR to GA mode.</li> <li>8. Level flight.</li> <li>9. Set 1.1 EPR.</li> <li>10. Configuration: -Clean wings level OR -Slats extended/flaps-40 degrees/gear down/wings level.</li> <li>11. Recovery in accordance with TO 1C-9A-1: <ul style="list-style-type: none"> <li><u>Clean:</u> <ul style="list-style-type: none"> <li>- Roll wings level.</li> <li>- Go-around EPR (brief mechanical stops if necessary in actual situation).</li> <li>- Adjust pitch to minimize altitude loss. (intermittent stick shaker)</li> <li>- Extend slats.</li> <li>- Accelerate to appropriate airspeed.</li> </ul> </li> <li><u>Configured:</u> <ul style="list-style-type: none"> <li>- Go-around EPR. (mechanical stops if necessary in actual situation)</li> <li>- Adjust pitch to minimize altitude loss. (intermittent stick shaker)</li> <li>- Maintain existing flap/slat and gear configuration.</li> <li>- Positive rate of climb and ground contact no longer a consideration - Establish Vref (minimum) and execute normal go around procedure</li> </ul> </li> </ul> </li> <li>12. Engine ignition as required.</li> </ol>
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**Table 9.3. Slow Flight.**

<p><b>Purpose:</b> Demonstrates aircraft characteristics at threshold speed.</p> <p><b>Procedures:</b></p> <ol style="list-style-type: none"> <li>1. Minimum altitude - 10,000 feet AGL.</li> <li>2. Hydraulic pumps high.</li> <li>3. Set airspeed marker at Vref for full flaps; gear down. Vref+50 for clean configuration, 15 degrees bank maximum.</li> <li>4. Maintain altitude.</li> <li>5. Configuration: <ul style="list-style-type: none"> <li>- Clean (simulate complete hydraulic loss) or;</li> <li>- Slats extended; flaps 50 degrees; gear down.</li> </ul> </li> <li>6. Execute turns to get the feel at threshold speed and stress lack of bank protection when maneuvering at this speed.</li> </ol>
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**Table 9.4. Rate of Roll Demonstration.**

<p><b>Purpose:</b> Demonstrates effects the spoiler mixer assembly has on lateral control.</p> <p><b>Procedures:</b></p> <ol style="list-style-type: none"> <li>1. Minimum altitude: 5,000 feet AGL</li> <li>2. Airspeed 200-220 knots.</li> <li>3. Roll aircraft from side-to-side smartly with equal aileron input not to exceed 45 degrees bank angle.</li> <li>4. Repeat with speed brakes extended and note difference in roll rate (differential spoiler assist).</li> <li>5. Place rudder control to manual.</li> <li>6. Turn off all hydraulic pump switches.</li> <li>7. Bleed hydraulic pressure to zero by pumping spoiler handle and repeat exercise, noting decreased roll rate (no spoiler assist, same as no flap pattern would be).</li> <li>8. Restore hydraulic pressure and place rudder control to normal position.</li> </ol>
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**Table 9.5. Free-Fall Gear Extension.**

*Purpose:* Demonstrates free-fall capability of landing gear.

***Procedures:***

1. Rudder control manual.
2. Right engine, Auxiliary, and Alternate hydraulic pump switches - OFF
3. Slats extend/flaps 15 degrees.
4. Ensure right hydraulic system and alternate gear extension system are depleted.
5. Airspeed-slowng to Vref+50.
6. Place landing gear control handle in DOWN position.
7. Pull emergency landing gear extension lever to full UP position.
8. Gear should fall and lock into position.
9. Stow emergency landing gear extension lever.
10. If gear is **NOT** to be raised by alternate motor/pump, proceed to step 11.  
Alternate motor/pump switch - ON  
**Ensure GEAR DOOR OPEN light out prior to continuing.**  
Landing gear control handle - UP  
Landing gear warning and gear door open lights - OUT
11. Repressurize right hydraulic system.  
**Ensure GEAR DOOR OPEN Light out prior to continuing**
12. Place landing gear control handle in UP position.
13. Rudder control-PWR.

## Chapter 10

### LOCAL PROCEDURES

**10.1. General.** Units will define local operating procedures in this chapter.

## Chapter 10 (SCOTT)

### 375 AW/932 AW C-9 LOCAL PROCEDURES

**10.1. (Added-SCOTT) General.** This supplement contains policies and guidance unique to the mission of the 375 AW/ 932 AW. This supplement will be used in conjunction with the basic instruction, aircraft flight manual, flight information publications, and applicable HQ USAF and HQ AMC directives. The 375 OG/CC has overall responsibility and waiver authority for this supplement (see AFI 11-2C-9V3, *C-9 Operations Procedures*, paragraph 1.4.).

#### **10.2. (Added-SCOTT) Command and Control.**

10.2.1. (Added-SCOTT) The operational control of the C-9A aeromedical missions within the Continental United States (CONUS) is exercised by the Commander, Air Mobility Command. Flight following and mission coordination of Air Force Reserve Command (AFRC) airlift and training missions is exercised by HQ AFRC/DO. In conjunction with the Global Patient Movement Requirements Center (GPMRC), the Tanker Airlift Control Center (TACC) accepts requirements from eligible users, integrates aeromedical airlift requests into missions, and manages each mission until it is completed (see AFI 11-2C-9V3, paragraph **2.1.**).

10.2.2. (Added-SCOTT) The mission planning function is handled by TACC. Complete mission information will be provided by TACC to the 375 AW Command Post (375 AW/CP) before mission show time. In turn, the 375 AW/CP will present mission set-up folders, including complete Integrated Flight Planning System mission products, to the aircrew in Building 505 at show time. For aircrews that are away from home station after remaining overnight (RON), TACC faxes packages to the Aeromedical Staging Squadrons (ASTS) as described in paragraph **10.2.5. (Added)** of this supplement. If not, 375 AW/CP maintains a copy of the products and can fax them to the aircraft commander (AC) outside of TACC planner's duty hours (see AFI 11-2C-9V3, paragraph **2.1.**).

10.2.3. (Added-SCOTT) Rerouting or Diverting a Mission. En route diversion support will be worked through the TACC. If the crew must deviate from the planned mission itinerary (e.g., weather or medical emergency), notify the TACC as soon as practical. If a diversion becomes necessary due to a change in a patient's condition, the AC will make every effort to comply with the requests of the Medical Crew Director (MCD). If an en route diversion becomes necessary for reasons other than a change in a patient's condition, the AC will coordinate with the MCD before deciding the point of landing. The welfare of the patient is an important consideration in all decisions (see AFI 11-2C-9V3, paragraph **2.4.1.**).

10.2.4. (Added-SCOTT) Aircrew Responsibilities. During RONS, crews will not use the ASTS for command and control purposes. At RON locations that have an AMC CP (e.g., Andrews and Travis AFBs), crews will recap the day's mission times and establish a legal for alert time with the CP. By show time the following morning, mission set-up materials will be faxed to the ASTS by the TACC or the local CP. The AC must call the local CP or TACC to verify the accuracy of the information. At locations without an AMC CP (e.g., Keesler and Kelly AFBs), crews will contact the TACC directly to recap the day and establish a legal for alert time. At such locations, the crew will plan to self-alert, must tell the TACC how the crew may be reached during crew rest, and where the next day's mission information should be faxed for crew pick-up (see AFI 11-2C-9V3, paragraph **2.5.**).

10.2.4.1. (Added-SCOTT) Upon mission completion at Scott AFB, provide completed copies of all required mission forms to the 375 AW CP.

10.2.5. (Added-SCOTT) Operational C2 Reporting. The procedures listed in AFI 11-2C-9V3, paragraph 2.6, pertain only to aircraft movement reporting. The MCD will obtain patient information directly through the GPMRC.

10.2.5.1. (Added-SCOTT) The AC will ensure arrival and departure times are passed to the TACC as soon as practical. When operating at a location with an AMC CP, this information is automatically passed for the crew via C2IPS. However, when operating at a location without an AMC CP, the crew must pass the times directly to the TACC. Aircrews may contact the TACC by dialing 1-800-AIR-MOBL (1-800-247-6625), or requesting a phone patch on an HF Global Command and Control Frequency, as outlined in the flight information handbook. To ensure an effective and efficient command and control process, the TACC needs prompt notification of aircraft departures and arrivals. The TACC initiates an overdue aircraft checklist when they cannot confirm aircraft arrival at the destination within 30 minutes of an estimated time of arrival (ETA) at CONUS stations and within 1 hour of ETA at Outside the Continental United States (OCONUS) stations. If they do not receive a departure message, the aircraft is considered overdue at its destination when it exceeds the time limits above based on the aircraft's estimated time of departure. If mission controllers are unable to confirm aircraft status within 1 hour, they request TACC Director of Operations (senior) approval to notify the appropriate rescue coordination center to begin an extended communications search. To prevent unnecessary initiation of the overdue aircraft checklist, if communications capability is limited at the next destination, the TACC recommends advising the controller that you will not contact them until the subsequent destination. The TACC will manage all CONUS C-9 airevac missions. For OCONUS training missions, the TACC will manage the departure from Scott AFB. After departure, the appropriate cell will assume responsibility for flight following (AFRC CP for 932 AW training and airlift missions flying on AFRC-approved mission itineraries). Do not wait through several stops to report times, and do not delay the mission to pass routine movement information if you cannot establish communications with the TACC. When conducting local area transition training at other than Scott AFB and MidAmerica Airport runways, instructors will inform the 375 AW/CP of the training location prior to departing Scott AFB, and the instructors will monitor the 375 AW/CP frequencies while airborne if feasible. One-day out-and-back trainers that depart the local area and full stop at another location will report landing times and maintenance status for flight following purposes to the 375 AW/CP (see AFI 11-2C-9V3, paragraph 2.6.1.).

10.2.6. (Added-SCOTT) For mission delays, the AC and MCD will discuss and jointly determine the reason for the delay. The AC has the responsibility to pass the delay information to the TACC. Review AMCI 10-202V6, *Mission Reliability Reporting System (MRRS)*, for delay codes (see AFI 11-2C-9V3, paragraph 2.6.3.).

10.2.7. (Added-SCOTT) Telephone numbers that may be frequently used are listed in **Table 10.1. (Added-SCOTT)** (see AFI 11-2C-9V3, paragraph 2.8.).

**Table 10.1. C2 Agency Telephone Numbers.**

Agency	Telephone Number
TACC	1-800-AIR-MOBIL
TACC C-9 MISSIONS	DSN 779-0322
TACC C-9 FLIGHT PLANNERS	DSN 779-3625/3189
SCOTT COMMAND POST	DSN 576-5891
USTC/GPMRC	DSN 779-4201/800-874-8966
TACC AE Cell Duty Officer	DSN 779-0330
ANDREWS COMMAND POST	DSN 858-5058
TRAVIS COMMAND POST	DSN 837-5517
ANDREWS ASTS	DSN 858-5424
KEESLER ASTS	DSN 597-6153
KELLY ASTS	DSN 554-7237
TRAVIS ASTS	DSN 799-3540
AFRC COMMAND POST	DSN 497-0680/800-223-1784 x70680

10.2.8. (Added-SCOTT) Senior Medical Authority. The MCD is the senior medical authority onboard all aeromedical evacuation (AE) missions and is responsible for determining what is beneficial or detrimental to the patients. If a physician is onboard as an attendant, he or she will make medical decisions with respect to that specific patients care and may be consulted for advice as appropriate.

### 10.3. (Added-SCOTT) Crew Management.

10.3.1. (Added-SCOTT) Crew Complement for AE Missions. Aircrews will use the following additional guidance when using **Table 3.1. NOTES:** 1. When passengers are carried without a qualified flight nurse or AE technician, the AC will designate a current and qualified C-9 crewmember to perform these duties (1 qualified crewmember for up to 20 passengers; 2 qualified crewmembers required if more than 20 passengers are carried). The crewmember will perform flight attendant duties described in TO 1C-9A-1, *Flight Manual (Douglas Aircraft)*, and brief all passengers IAW paragraph **6.12.7.**, this supplement. The briefing guide is located in the aircraft mission kit. Ensure all equipment is secured prior to takeoff and assist passengers as necessary during flight. If a crash landing or ditching becomes necessary, accomplish the First Steward Checklist for the applicable situation at the direction of the AC (see **Table 3.1.**).

10.3.2. (Added-SCOTT) The Flight Duty Period (FDP) should not be planned to exceed 14 hours (waiver authority for a mission planned in excess of 14 hours is the 375 OG/CC). The HQ AMC/DO remains the waiver authority for missions that will exceed 16 hours of FDP (see AFI 11-2C-9V3, paragraph **3.6.5.1.**).

10.3.3. (Added-SCOTT) Missions will be limited to a maximum of eight stops. A ninth stop can be added with the 375 OG/CC's approval. Any stops added after the TACC flight planner's duty hours or

after crew show require 375 OG/CC approval, excluding changes for added urgent patients (see AFI 11-2C-9V3, paragraph 3.6).

**10.4. (Added-SCOTT)** Examples of limited nonflying duties include mission planning and light office duties. The duties will be at aircrew discretion, and crews will not be scheduled for office duties during that time period (see AFI 11-2C-9V3, paragraph 3.7.1).

**10.5. (Added-SCOTT) Operational Procedures.**

10.5.1. (Added-SCOTT) Flight Station Entry. Aircraft commanders will not allow routine passengers to sit in the jump seat for takeoffs or landings. Authorized jump seat personnel include other pilots, additional medical crewmembers, crew chiefs or distinguished visitors (see AFI 11-2C-9V3, paragraph 5.3).

10.5.2. (Added-SCOTT) Seat Belts. Medical crew instructors or medical flight examiners are not exempt from standard seat belt requirements. Aeromedical Evacuation Crewmembers (AECM) should be secured with litter straps or other restraints when away from their seats for takeoff or landing (see AFI 11-2C-9V3, paragraph 5.7.4).

10.5.3. (Added-SCOTT) Transportation of Pets. Pets are not permitted on AE flights. Working dogs may be carried IAW DOD 4515.13-R, *Air Transportation Eligibility* (see AFI 11-2C-9V3, paragraph 5.13).

10.5.4. (Added-SCOTT) Runway Condition Reading Limitations. The 375 AW/932 AW C-9s will not take off on runways covered with wet snow, slush or standing water (see AFI 11-2C-9V3, paragraph 5.15.2).

10.5.5. (Added-SCOTT) Airfield Suitability and Restrictions Report (ASRR). Units conducting operations into the Central or South American theaters will comply with theater restrictions cited in **Table 10.2. (Added-SCOTT)** (see AFI 11-2C-9V3, paragraph 5.15.7).

**Table 10.2. (Added-SCOTT) 375 OG Central and South American Theater Restrictions.**

The AC will have 300 hours MP time in the C-9A
MP time includes initial mission evaluation
MP time does NOT include FP time
IP/EPs are NOT excluded from the MP time requirement
The AC must have operated in the respective theater as a crewmember in the C-9A within the previous 3 years. <b>EXCEPTION:</b> The AC restriction does not apply if the copilot is at least an MP or higher who has operated in the respective theater in the C-9A; however, the AC's hour restrictions cited above must still be met.

10.5.5.1. (Added-SCOTT) 375 OG Certification Airfields. The 375 OG supplements the certification airfields cited in Part One of the ASRR with Eagle County Regional Colorado.

**NOTE:** Prior to operating in this airfield, the AC must have actively monitored a takeoff and approach in the C-9A to obtain certification. **EXCEPTION:** The AC restriction does not apply if the copilot is a least an MP or higher who has operated into the respective field in the C-9A. Waiver authority for the above airfields is the 375 OG/CC.

10.5.5.2. (Added-SCOTT) Aircrews planning OCONUS flights will reference **Attachment 5 (Added)**, this supplement.

10.5.6. (Added-SCOTT) Post Flight. For aircraft equipped with a Global Positioning System/Flight Management System, check inertial navigation unit drift prior to shutdown (see AFI 11-2C-9V3, paragraph **5.18.6.**).

10.5.7. (Added-SCOTT) FCF (Functional Check Flight) Restrictions. An FCF crew will consist of, as a minimum, an FCF-certified instructor pilot (IP) (in command) and an FCF-certified AC. Waiver authority for this policy is the 375 OG/CC. Pilot certification will consist of completing the FCF training specified in the 375 OG FCF Pilot Training Program, contained in the Wing Employment Training Plan. This training is the same for IPs and ACs with the exception that ACs don't have to fly an FCF profile prior to being certified. Place the FCF training and certification letter in the left side of the pilot's flight evaluation folder after it has been completed (see AFI 11-2C-9V3, paragraph **5.21.2.**).

10.5.8. (Added-SCOTT) Power-Back. Units will request approval for power-back training through their respective OG/CC. The 375 OG/CC has approved the 375 OSS/OSF, to include power back training in the AC's curriculum (includes prior qualified pilots being qualified as "First Pilots" during initial qualification training). The training will be documented in the student's AF Form 4022, **Airman Training Folder**, to be forwarded to the gaining unit. In all other cases, the power-back procedure will only be used as a last resort and requires 375 OG/CC approval (see AFI 11-2C-9V3, paragraph **5.24.**).

## **10.6. (Added-SCOTT) Aircrew Procedures.**

10.6.1. (Added-SCOTT) Aircrew Uniform. In accordance with AFI 11-301, *Aircrew Life Support Program*, flying jackets listed in AS 016, *Special Purpose Clothing and Personal Equipment*, and TO 14P3-1-112, *Maint Instr – Nomex Flt Gr Coveralls, Types CWU-27/P and CWU-28/P and Gloves, Type GS/FRP-2, Jacket, Flyers Summer Type CWU-36/P, Jacket, Flyers Winter Type CWU-45/P, Hood, Winter, Flyers (CWU-17/P Jacket), Trousers, Flyers, Extreme Cold Weather, CWU-18/P*, are the only jackets aircrew are authorized to wear during flight. The A-2 Leather Flight Jacket does not provide the same degree of fire protection as the Nomex ® Flight Jackets and should not be worn during flight (see AFI 11-2C-9V3, paragraph **6.1.2.**).

10.6.1.1. (Added-SCOTT) Crewmembers will remove earrings prior to performing aircrew duties in or around the aircraft.

10.6.2. (Added-SCOTT) Passports/Shot Records. Due to the nature of our near offshore and mobility requirements, 375 AW and 932 AW medical crewmembers will carry shot records and passports on all missions (see AFI 11-2C-9V3, paragraph **6.2.1.**).

10.6.3. (Added-SCOTT) Mission Kits. In addition to mandatory items indicated by the "\*" symbol, mission kits will include items indicated by the "&" symbol contained in **Table 10.3. (Added-SCOTT)** (see AFI 11-2C-9V3, paragraph **6.10.**).

**Table 10.2. 375 AW/932 AW Mission Kit Requirements.**

& AFI 11-2C-9V3_375AWSUP1, 375 AW/932 AW C-9A Local Operating Procedures
& AFI 23-202, <i>Buying Petroleum Products, and Other Supplies and Services Off-Station</i>
& SAFBI 13-201, <i>Airfield Management and Air Traffic Control</i>
& 375 AW Wing Operations Plan
& DD Form 175, <b>Flight Plan, Military</b>
& DD Form 1801, <b>International Flight Plan, DOD</b>
& DD Form 2131 or AF Form 96, <b>Passenger Manifest</b>
& AF Form 15, <b>USAF Invoice</b>
& AF Form 315, <b>USAF AVFuels Invoice</b>
& AF Form 457, <b>USAF Hazard Report</b>
& AMC Form 41, <b>Flight Authorization</b>
& AMC Form 97, <b>AMC Unusual Occurrence/Bird Strike Worksheet</b>
& 375 AW Form 2, <b>Loading Schedule (C-9 Aircraft)</b>
& Customs Form 6059B, <b>Customs Declarations</b>
& Tanker Airlift Control Center Pamphlet
& Emergency Passenger Oxygen System (EPOS) Briefing Guide (see <a href="#">Attachment 7</a> , this supplement)
& Integrated Flight Management (IFM) Aircrew Flimsy
& Flying Training Briefings

10.6.4. (Added-SCOTT) Route Navigation Kits. The 11 AS will maintain Route Navigation Kits for each locally based C-9A for CONUS missions. Base Operations will ensure availability of a minimum of two complete worldwide kits (see AFI 11-2C-9V3, paragraph [6.11](#)).

10.6.5. (Added-SCOTT) Patient/Passenger Briefings. The EPOS Briefing Guide (see [Attachment 6 \(Added\)](#), this supplement) will be used to brief passengers and patients. The briefing guide will be reproduced and inserted behind each AECM's AFI 11-2C-9V3 CL-3, *Patient/Passenger Briefings Guide*. A copy will also be placed in the mission kit for briefings, in the event no AECMs are part of the crew complement and passengers are carried (see AFI 11-2C-9V3, paragraph [6.12.7](#)).

10.6.6. (Added-SCOTT) Departure Routing/Climb-out Performance. The maximum recommended takeoff weight charts for the C-9A guarantee a 2.4% climb gradient. The 2.5% gradient, now mandated, requires that the Initial Climbout Gradients - One Engine Charts, Figure A2-22 or Figure A2-41 in TO 1C-9A-1-1, *Performance Manual (Performance Data)*, be used to determine if the aircraft is capable of meeting the 2.5% gradient (see AFI 11-2C-9V3, paragraph [6.16.2](#)).

10.6.7. (Added-SCOTT) Adverse Weather.

10.6.7.1. (Added-SCOTT) Freezing Precipitation/Icing. Observed or forecast freezing drizzle correlates to "moderate icing." Freezing rain correlates to "severe icing." The bottom line is this policy. If the forecast is for freezing rain, the icing condition will be severe. If the forecast is for

freezing drizzle, the icing should be forecasted as moderate. In any event, if the forecast specifically calls for severe icing (regardless of whether it is associated with freezing rain or drizzle), the icing condition is severe (see AFI 11-2C-9V3, paragraph 6.21.1.).

10.6.7.2. (Added-SCOTT) When a weather warning is issued at Scott AFB, comply with procedures outlined in SAFBI 13-201, *Airfield Management and Air Traffic Control (ATC)*. Crews should follow these procedures at any airfield unless more restrictive guidance is available (see AFI 11-2C-9V3, paragraph 6.21.).

10.6.8. (Added-SCOTT) Fuel Conservation. **Attachment 7**, this supplement, C-9A Fuel Conservation Guide is provided to aircrews as possible fuel conservation techniques. (See paragraph 6.22.).

10.6.9. (Added-SCOTT) Aircraft Servicing and Ground Operations.

10.6.9.1. (Added-SCOTT) Aircraft Fuel Purchase. Aircrews will comply with the procedures outlined in the In-Flight Refueling (IFR) Supplement (extract below from the U.S. IFR Supplement): Fuel available through U.S. Military Base Supply, Into-Plane Contract and/or reciprocal agreement, is listed first. Military fuel entry is followed by "Mil." Where contract fuel is available, the name of the refueling agent is shown. Military fuel should be used first if it is available. When military fuel cannot be obtained, but contract fuel is available, government aircraft should refuel with contract fuel to avoid potential disputes with into-plane contractors. Fuel that is not available through the avenues listed above is shown preceded by NC (no contract) and enclosed in parentheses. If there are questions as to whether a contract exists at an individual airport location, DFSC/PH Fort Belvoir, VA can be contacted by telephone via DSN 427-8489 or Comm (703) 767-8489. **NOTE:** The DD Form 1896, **Jet Fuel Identaplate**, is the only acceptable plate for use in documenting into-plane contract fuel purchases (see AFI 11-2C-9V3, paragraph 6.24.).

10.6.9.2. (Added-SCOTT) Concurrent Ground Operations. Concurrent servicing during aeromedical missions, including the loading and unloading of patients and passengers is allowed to stay on mission timing IAW TO 00-25-172. If no delay is anticipated, crews should comply with (AFI 11-2C-9V3, paragraph 6.24.5. and minimize the number of people onboard the aircraft (see AFI 11-2C-9V3, paragraph 6.24.3.).

10.6.9.2.1. (Added-SCOTT) Grounding Procedures. In accordance with TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding (ATOS)*, grounding can be accomplished by contacting the aircraft grounding/bonding connector, an unpainted aircraft surface (i.e., forward stair rails) or a static ground (i.e., the metal rings embedded into the ramp) by bare hand (see AFI 11-2C-9V3, paragraph 6.24.3.1.).

10.6.9.2.2. (Added-SCOTT) Deplaning Patients/Passengers before Refueling. When deplaning patients or passengers before refueling or any ground stops, the individual escorting the group must coordinate with responsible personnel and determine a safe location to stand. This coordination could include transient services, ground maintenance, or Security Forces. If no one is available and you are at a location where normal AE support personnel are not available, the patients/passengers should remain on board. This policy does not include permission to smoke. A responsible ground agent must grant specific permission before allowing any person to smoke. Air Force standards and guidelines do not always apply to other DoD or civil airfields. It is the entire crew's responsibility to ensure this guidance is followed and safety is not compromised by anyone (see AFI 11-2C-9V3, paragraph 6.24.3.3.).

10.6.9.2.3. (Added-SCOTT) The no smoking restriction includes medical support personnel accomplishing patient transfer duties (see AFI 11-2C-9V3, paragraph 6.24.3.6.).

10.6.9.2.4. (Added-SCOTT) The safety observer will restrict vehicle movement within the Fuel Servicing Safety Zone (FSSZ). The FSSZ is the area within 50 feet of any pressurized fuel port (i.e., fuel truck, single point refueling receptacle, etc.), and 25 feet around aircraft fuel vent outlets (see AFI 11-2C-9V3, paragraph 6.24.3.7.).

10.6.10. (Added-SCOTT) Oxygen Requirements. Minimum oxygen requirements to depart home station are 15 liters-cabin/6 liters-crew. If mission requirements dictate, the AC and MCD may increase these minimums. Missions may depart with less upon concurrence of the AC, MCD, and GPMRC (see AFI 11-2C-9V3, paragraph 6.25.1.).

10.6.11. (Added-SCOTT) Passenger Handling (see AFI 11-2C-9V3, paragraph 6.27.).

10.6.11.1. (Added-SCOTT) Passenger's Seat Release. The MCD will provide the AC a tentative seat release to subsequent stops and final destination using the 375 AW Form 50, **C-9 Load Message**. The MCD will prepare the 375 AW Form 50 in duplicate, prior to arrival at each en route destination. The original will be given to the AC; the 3AET will provide a copy to the ground emergency personnel at en route stops. No duplicate is required on the termination leg. After considering aircraft performance limitations, the AC will ensure a maximum seat release is passed to the next destination (see AFI 11-2C-9V3, paragraph 6.27.1.).

10.6.11.2. (Added-SCOTT) Passenger Manifesting. A complete, updated Space "A" manifest will be left with a responsible agency at every stop prior to takeoff. The 375 OG/OGV has identified responsible agencies and prioritized them (see AFI 11-2C-9V3, paragraph 6.27.2.).

10.6.11.2.1. (Added-SCOTT) If a passenger terminal is available, leave a complete manifest of Space "A" passengers with a passenger terminal representative prior to takeoff.

10.6.11.2.2. (Added-SCOTT) If no passenger terminal is available, leave a complete Space "A" manifest with Base Operations.

10.6.11.2.3. (Added-SCOTT) If a passenger terminal and Base Operations are not available, leave the Space "A" manifest with Transient Alert personnel.

10.6.11.2.4. (Added-SCOTT) If the above-mentioned agencies are not available, leave a complete Space "A" manifest with Airport Security.

10.6.11.2.5. (Added-SCOTT) If a responsible person is not available to accept the passenger manifest, call the GPMRC controller and pass the full names and SSN of all space-available passengers manifested at that stop, and leave the name and location of the last complete manifest.

10.6.11.2.6. (Added-SCOTT) To alleviate the need to handwrite copies of Space "A" manifests, include the request for copies during the inbound message call. If necessary, have the next passenger terminal make the appropriate copies. Passengers manifested to a stop will not be remanifested to another stop beyond that point by the MCD unless no passenger service facility is available.

10.6.11.3. (Added-SCOTT) All 375 AW/932 AW aircrew members that plan to depart Scott AFB in an authorized additional crewmember (ACM) status will provide the Scott CP with a copy of

their orders a minimum of 2 hours prior to the mission departure time (see AFI 11-2C-9V3, paragraph 6.27.7).

10.6.12. (Added-SCOTT) Patient Loading Factors (see AFI 11-2C-9V3, paragraph 6.28.).

10.6.12.1. (Added-SCOTT) Patient Preparation. When there is a patient manifest change, the MCD will notify GPMRC of changes to planned or actual configuration prior to takeoff. In cases of add-on patients when the facility provides the MCD with the site and control number, the MCD is not required to call the GPMRC. Use a landline, if feasible. If not, use the cellular phone. If no phone is available, instruct the medical facility to find a phone ASAP and call the GPMRC 1-800 extension to update the manifest. The GPMRC will update and work the change (see AFI 11-2C-9V3, paragraph 6.28.1.).

10.6.12.2. (Added-SCOTT) Aircrew Seating. The flying crew chief (FCC) will normally occupy the jump seat during critical phases of flight. Since the jump seat is not approved for crash landing or ditching, an approved seat must be reserved for the FCC. Ensure either the forward ACM or an airline-type seat is available. If sufficient rest is not attained at RON locations, consideration should be given to reserving an airline-type seat for the FCC. If mission dictates the requirement for two FCCs, reserve a minimum of one airline-type seat due to the weight restriction of the forward ACM seat. If a seat is reserved for the FCC's use, ensure mission planning and patient loads are based on one less available seat. The MCD must notify the GPMRC as soon as this decision is made. The 2FN will reserve an appropriate passenger seat for the FCC (see AFI 11-2C-9V3, paragraph 6.28.5.).

10.6.12.3. (Added-SCOTT) Third Aeromedical Technician Crew Seat. Research has shown this seat was manufactured and approved IAW FAA standards, but not military specifications standards. In light of these facts, the seat is approved for use during all phases of flight by the 3d AET. However, if a passenger seat is available in Row 6, the 3d AET may elect to sit in one of those seats. The seat release will not be adjusted to provide a blue seat.

10.6.13. (Added-SCOTT) On-Time Takeoffs. If delays occur that will significantly delay arrival times at subsequent stops (15 minutes or more), the AC should coordinate with the MCD to determine if an adjusted schedule should be flown and/or down-line hospitals should be advised. Notify GPMRC to coordinate arrival/departure times with down-line medical facilities. Departures are authorized for medical facility "no shows" with GPMRC coordination if the facility has not or will not arrive by the scheduled departure time and only routine patients are involved. **NOTE:** For urgent, priority, and special patients, GPMRC approval must be obtained prior to departing in the event of a medical facility "no show." Early departures may be authorized on a case-by-case basis with prior coordination through the TACC/GPMRC (see AFI 11-2C-9V3, paragraph 6.31.).

10.6.14. (Added-SCOTT) Life Support and Dash 21 Equipment Documentation. The Charge Medical Technician (CMT) will inventory all aircraft life support equipment for aeromedical evacuation missions. The AC is responsible for the inventory on all other missions and may delegate that duty to another qualified crewmember (see AFI 11-2C-9V3, paragraph 6.51.).

10.6.14.1. (Added-SCOTT) Pre-positioned Life Support Equipment. All aircraft will have the life support equipment in the quantities listed in **Table 10.4. (Added-SCOTT)** (see AFI 11-2C-9V3, paragraph 6.51.3.).

**Table 10.4. (Added-SCOTT) Prepositioned Life Support Equipment.**

Equipment	Quantity
Personal Breathing Equipment	8
Airborne Warning and Control System	5
Quick-Dons	3
Smoke Mask	1
Restraint Harness	1
Survival Kit	1
20-Man Life Raft	3
20-Man Life Raft Outer Kit	3
Demonstration LPU Kit	1
EPOS	50
Life Preserver Set (LPS)	1
<b>NOTE:</b> LPS contains the following	
Adult/Child Life Preservers	50
MB-1 Adult Casualty Life Preservers	20
LPU-6/P Infant Cots	05

10.6.14.1.1. (Added-SCOTT) Adult/Child Life preservers will be placed under each patient/passenger seat and available at all crew positions. The remaining life support equipment will be stored in the patient's coat closet.

10.6.14.1.2. (Added-SCOTT) Twenty-Person Life Rafts. All missions will carry three 20-person life rafts in addition to those items listed above. Two life rafts will be placed under the central storage area; one will be placed on the floor of the patient coat closet.

10.6.14.2. (Added-SCOTT) The three-step ladder will be placed in the crew storage compartment.

10.6.14.3. (Added-SCOTT) The GPMRC is aware that litters may be limited to a "three-high" configuration if, in support of litter patients, extra medical supplies and/or medical equipment must be secured on a litter. If litter space is lost due to storage needs, notify the GPMRC of reduced litter space.

10.6.15. (Added-SCOTT) C-9A Litter Patient Door/Operation. In accordance with TO 1C-9A-1-CL-4, *AET's Abbreviated Checklist, Flying Crew Chiefs*, only qualified crewmembers and maintenance personnel who have received appropriate formal training on the litter ramp and door operation may operate the litter patient door and ramp. It is possible for the litter patient door open annunciator light to indicate that the door is closed and locked when it is not. This situation can happen when the door is closed, but resting on the doorjamb and not actually locked. Adhere to the following procedures:

10.6.15.1. (Added-SCOTT) Local Flights. The pilot making the external walk-around inspection will ensure that both external manual latch controls indicate the door is latched. The same individual will perform a visual check of the latches and lock pins located on the inside of the litter patient door to ensure the latches are in the closed position and the lockpins are in the locked position. This inspection will be reported to the AC prior to taxi.

10.6.15.2. (Added-SCOTT) Airevac Missions. The AC will appoint a crewmember, normally the flying crew chief or CMT, to inspect the litter patient door both inside and outside to ensure that it is properly closed and latched. The crewmember will report the doors status to a pilot prior to takeoff.

10.6.15.3. (Added-SCOTT) The AC will brief flight and medical crews on the above procedures prior to every mission.

10.6.15.4. (Added-SCOTT) An Over-Weight Litter (OWL) may be carried as standard equipment on all AE missions. The MCD will decide if the OWL will be carried in the main cabin or in the forward cargo hold.

10.6.15.5. (Added-SCOTT) An Emergency Equipment Litter (EEL) may be placed on all C-9 AE operational and training missions. Use and placement of the EEL is left to the discretion of the MCD.

10.6.15.5.1. (Added-SCOTT) If an EEL is used, crews will be responsible for setting up the cantilever arms, litter, and preflight of equipment. For charging purposes, equipment will be plugged into aircraft power for the entire duration of the mission. If additional electrical outlets are needed, utilize the ECAS cord. In lieu of an EEL, medical equipment should be stowed in central stowage in flight.

10.6.15.5.2. (Added-SCOTT) Equipment guidance not found in AFI 41-309, *Aeromedical Evacuation Equipment Standards*, can be located in the 375 AES Medical Logistics Supplement Index publications kit. The AECMs will use the Emergency Equipment Litter Guide, located in the Supplement Index, for guidance to set up the EEL.

10.6.15.5.3. (Added-SCOTT) The MCD's medical mission planning should allow for the setup of an emergency litter for in-flight medical emergencies. Keep in mind that equipment must be secured for landing, the emergency patient should be at a working level for CPR, and, if needed, crewmembers may need to be secured to the litter for landing.

10.6.15.5.4. (Added-SCOTT) The AE medical equipment should be stored in central stowage for security reasons during RON stops and will be stored in central stowage at home station. IME will remove rechargeable emergency medical equipment (LifePak 10 batteries and IMPAC suction) from the aircraft on mission termination to be charged IAW AFI 41-309. The IME Shop will replace all nonemergency medical equipment monthly with a one-for-one switch. The IME personnel will be at the aircraft for equipment support during all missions departing and returning home station.

10.6.16. (Added-SCOTT) Closing or Opening the Aft Stairway. Closing or opening the aft stairs will not be routinely accomplished from outside the aircraft. If it is necessary to close or open the aft stairs from the outside before closing the stairs, ensure no one is on the stairs aft of the aft cabin door by making visual/verbal contact with the crewmember providing coverage of the aft section of the aircraft.

10.6.17. (Added-SCOTT) Hand-Carried Baggage. All patients' hand-carried baggage will have a DD Form 600, **Patient's Baggage Tag**, attached. This policy will expedite returning hand-carried baggage in the event an article is inadvertently left on the aircraft due to tail swaps, ground evacuations, etc. Crewmembers must ensure that all hand-carried baggage fits underneath the seat or is properly stowed in the cargo compartment. Articles will not be placed on top of the life rafts/preservers or impede emergency equipment in the patient coat closet.

**10.7. (Added-SCOTT) Fuel Documentation.** The AF Form 664, **Aircraft Fuels Documentation Log**, must be used to document fuel purchases. The flying crew chief will complete AF Form 664 on off-station missions; pilots will complete the form for flights without flying crew chiefs. Spell out the airfield name and also use the ICAO Identifier. Personnel will ensure the fueling station location is legible on the fueling receipt. This step will make it easier for tracking purposes if a discrepancy occurs. Bring the AF Form 664 into the Maintenance Debrief at the end of the day for trainers or at the end of the mission for airevac and cross-country trainers. The AC is responsible for the completeness, accuracy, and legibility of this form (see AFI 11-2C-9V3, paragraph **8.6.3.1**).

**10.8. (Added-SCOTT) Training Policy.**

10.8.1. (Added-SCOTT) The AC touch-and-go certification will not be routinely used. Certification must be approved by the respective OG/CC, in addition to the squadron commander (see AFI 11-2C-9V3, paragraph **9.6.11**).

10.8.2. (Added-SCOTT) Flight Following. When conducting local area transition training at other than Scott AFB and MidAmerica Airport runways, instructors will inform the 375 AW/CP of the training location prior to departing Scott AFB, and the instructors will monitor the CP frequency while airborne if feasible. Off-station trainers will report landing times and maintenance status for flight following purposes to the CP.

**10.9. (Added-SCOTT) Forms Prescribed.** The 375 AW Form 2, **Loading Schedule (C-9A Aircraft)**, will be used to ensure the aircraft stabilizer setting is correct. The 375 AW Form 19, **C-9A Flight Planning Log**, will be used for planning C-9 missions. The 375 AW Form 19 shows scheduled takeoff and arrival times, planned and required fuel loads, and planned patient loads. The 375 AW Form 50 is used for computing aircraft stabilizer setting and relaying arrival information. The AMC Form 278, **Debriefing and Recovery Preplan**, should be completed at the end of each mission with maintenance debriefing personnel to ensure complete communication between Operations and Maintenance concerning aircraft suitability for operational missions (see AFI 11-2C-9V3, **Chapter 8**).

**10.10. (Added-SCOTT) Forms Adopted.** AF Form 847, **Recommendation for Change of Publication**; AF Form 4022, **Aircrew Training Folder**; DD Form 1896, **JetFuel Identaplate**

## Chapter 11

### INTENTIONALLY LEFT BLANK

**11.1.** This chapter is not used for C-9A operations (Navigational Procedures).

## Chapter 12

### MISCELLANEOUS PROCEDURES

**12.1. General.** This chapter outlines additional procedures not in aircraft flight manuals or other technical orders.

**12.2. Responsibilities.** The AC is responsible for the condition of the aircraft and works in coordination with the crew chief and medical crew to remain informed of all changes in aircraft status.

**12.3. Engine Performance Monitoring.** The flight crew will complete engine performance monitoring documentation on all operational missions, when conditions permit.

12.3.1. Engine Performance Monitoring Conditions. The following conditions must be met prior to completing EPM documentation to ensure the collection of accurate data: Aircraft at level flight attitude, clear of turbulence and precipitation, engine throttle position set at stable setting for 2 minutes.

12.3.2. Engine Performance Monitoring Procedures. Attempt to accomplish two coupons per-sortie, one after level off and one prior to descent. Completed coupons will be given to maintenance debriefing personnel or collected at designated location.

**12.4. General Navigation Duties.**

12.4.1. Post Flight. If any INS system error is greater than 2.5 NMs per hour or residual ground speed is greater than 15 knots, an AFTO Form 781A entry is required.

## Chapter 13

### FLIGHT ATTENDANT PROCEDURES

**13.1. General.** This chapter outlines procedures for flight attendants (FA) not in the aircraft flight manuals or elsewhere in this instruction.

**13.2. Responsibilities.** Primary responsibilities of the FA is to act as cabin representative of the AC, provide cabin service, instruct passengers in using emergency equipment when required, and direct and control passengers under emergency conditions. On multi-FA crews, the first FA acts as FA supervisor and assigns specific duties and responsibilities to each FA.

**13.3. Not used.**

#### **13.4. Pre-mission Duties.**

13.4.1. Contact the AC for draft itinerary times and any information already received concerning cabin service requirements. Anticipate meal requirements from the itinerary and draft menu items that could be provided as suggestions.

13.4.2. Call or visit the mission contact officer to determine requirements.

**13.5. Preflight Duties.** The first FA will conduct an FA briefing to assign FA positions and duties.

13.5.1. Perform applicable preflight checklists. Check to see that AMC Form 365, **Passenger Briefing Card**, or applicable passenger information cards are properly distributed.

13.5.2. Prepare meals as required.

13.5.3. Pick up or prepare passenger manifests as appropriate. Turn in any required border clearance forms.

13.5.4. Coordinate baggage loading. If loading space-available passengers at a non-United States military facility, perform antihijacking inspections as directed by the AC.

13.5.4.1. Inspect baggage in an area well away from the aircraft.

13.5.4.2. Load baggage to preclude in-flight passenger access (except for carry-on baggage).

13.5.4.3. Inspect carry-on baggage prior to boarding passengers.

13.5.5. Coordinate passenger boarding.

13.5.6. Before takeoff, brief passengers as directed by the AC.

**13.6. Passenger Handling.** Observe these general rules:

13.6.1. Coordinate with the AC before answering questions about the mission.

13.6.2. Do not unduly alarm passengers by relaying details of abnormal conditions not readily discernible by passengers.

13.6.3. Keep the AC informed of all passenger problems, unusual requests, etc.

**13.7. Border Clearance.** Public Health, Customs, Immigration, and Agriculture require certain forms for border clearance. The FA is the custodian for these and other forms that are required. Ensure required forms are aboard the aircraft prior to takeoff. Distribute forms to passengers and crew for completion prior to landing. Deliver these forms to the proper persons at en route and terminating stations.

**13.8. En Route and Postflight Duties.** Monitor the passenger cabin. Assure passenger safety and comfort.

13.8.1. Prepare and serve meals, snacks, and beverages as required.

13.8.2. Distribute magazines, blankets, pillows, and other comfort items as needed.

13.8.3. Be attentive to passenger needs.

13.8.4. Before arrival, complete border clearance forms as required.

13.8.5. Assist passenger deplaning.

13.8.6. Unload baggage and assist in transfer to passengers' transport.

13.8.7. Inspect passenger cabin for personal items. If passenger baggage or personal items are inadvertently left behind, inform the AC who will immediately take positive action to have the item delivered to the passenger.

13.8.8. Clean passenger cabin, lavatories, and galley areas. Vacuum carpets, if required.

13.8.9. Arrange or procure food and beverages required for subsequent mission legs.

**13.9. AF Form 4084, Flight Attendant Mission Planning Worksheet.**

13.9.1. This form is designed to assist the FA in organizing passenger service requirements. The reverse of the form is a checklist to help inventory mission supplies.

13.9.2. Record details received from the contact officer on the front of the form. Use the reverse as a pre-mission or preflight check-off list.

13.9.3. The unit may overprint local requirements on the reverse of the form.

**13.10. AF Form 4085, Mission Expense Record.**

13.10.1. Use AF Form 4085 to record all expenses related to passenger services. Units may develop local procedures for completion and mission expense procedures.

13.10.2. Complete AF Form 4085 in four copies. Turn in the original and third copy to the fund custodian when the account is settled. Give the on-board contact the second copy. Turn in the fourth copy to the FA NCOIC.

13.10.2.1. Ensure the on-board escort officer understands all entries.

13.10.2.2. The AC and first FA must sign. If an escort officer is not aboard, indicate in the applicable signature block "not on board."

13.10.2.3. Complete all items in the "billing data" block unless a cash settlement is made.

13.10.2.4. If fund money is used, attach receipts for all expenditures to fund accountant's copy of AF Form 4085.

**EXCEPTION:** If a cash settlement is made, give all receipts to the on-board escort officer.

13.10.2.4.1. If unable to get a receipt from a vendor, prepare an itemized list of purchases. Sign and date this list.

13.10.2.4.2. Total receipts must equal the amount shown as “total passenger expense” less the cost of liquor miniatures. No purchase for personal use, crew meals, or other missions may appear on the passenger AF Form 4085. Obtain separate receipts or subtract applicable items. Passenger AF Form 4085 has a 5 percent surcharge added on bills totaling over \$50.

13.10.2.5. Attach a copy of the passenger manifest indicating passengers on board for each mission leg to the AF Form 4084 for all accounts to be billed.

## Chapter 14

### COMMUNICATION SYSTEM OPERATOR (CSO) PROCEDURES

**14.1. General.** This chapter outlines CSO procedures not covered elsewhere.

**14.2. Responsibilities.** The CSO is responsible for inspecting, operating, and maintaining all communications-electronic equipment aboard the aircraft while on a mission.

14.2.1. Assure communications resources are available.

**14.3. Pre-mission Procedures.**

14.3.1. Include the Andrews AFB aeronautical station as an addressee on mission itinerary messages when special communication support is required. If the user has already coordinated required support, say so in the message.

**14.4. Preflight Procedures.** Accomplish according to directives.

**14.5. In-flight Procedures.**

14.5.1. Assure SATCOM, INMARSAT, and HF voice circuits are available:

14.5.1.1. Transmit departure and arrival reports and other command and control communications.

14.5.1.2. Relay DV messages as required.

14.5.2. Receive and distribute message traffic. Assure classified messages are stamped with applicable markings.

**14.6. Postflight Procedures.**

14.6.1. After passengers have deplaned, inspect passenger compartments for classified material.

14.6.2. Put all classified waste in a destruction folder and store until mission is completed.

**14.7. Postmission Procedures.**

14.7.1. Destroy classified waste.

14.7.2. Debrief applicable agencies.

**Chapter 15****INTENTIONALLY LEFT BLANK**

**15.1.** This chapter is not used for C-9A operations (Air Refueling).

## Chapter 16

### MISSION PLANNING

**16.1. General.** This chapter standardizes procedures for planning, briefing, and reviewing wartime or contingency missions. Mission planning is normally conducted the day of the mission. OG/CC may elect to use a "Day Before Mission Plan" option for missions whose itinerary is known in advance. The AC is ultimately responsible for the accuracy of the mission materials. Unit mission planning facilities should possess essential mission planning materials.

#### **16.2. Mission Planning.**

16.2.1. Wartime and Contingency Missions. C-9 operational planners should prepare detailed master flight plans to meet the requirements of the OPORD/Tasking. Flight plans based on a "planning forecast" should be reviewed before the mission is flown, using an "operational forecast."

16.2.1.1. As a minimum, prepare the following items as they apply to the mission:

16.2.1.1.1. Flight Plans, Maps, Charts, and Applicable Forms

16.2.1.1.2. Copies of OPORD/Tasking

16.2.1.1.3. Communication and EMCON requirements

16.2.1.1.4. Tactics and procedures to be employed

16.2.1.2. The preparing staff agency should provide complete and accurate data. Packages should be annotated to include who prepared the package.

16.2.2. Training Missions. Operating unit determines who plans the mission.

**16.3. Mission Briefing (if applicable).** The mission briefing presented by the mission planners will normally be conducted no earlier than two days before the mission. The purpose of the mission briefing is to acquaint all crewmembers with the general aspects of the mission. The group or squadron commander, combat support group staff specialists, all crewmembers of each participating crew, and other personnel concerned with the mission should attend. The mission briefing may include all information pertinent to the mission and eliminate the need for later specialized briefings. In cases where highly specialized information or techniques require additional explanation or review, schedule a specialized briefing. During the briefing, indicate what preparation has been accomplished and what is yet to be accomplished. Use the following as a guide in conducting a briefing:

16.3.1. Security classification and roll call for the briefing and mission.

16.3.2. Purpose of the mission, forces required (to include number of aircraft) and a statement of mission requirements in sufficient detail to ensure all crewmembers understand all the information.

16.3.3. Mission Requirements:

16.3.3.1. Crew composition

16.3.3.2. Crew alerting and reporting

16.3.3.3. Minimum ground times

16.3.3.4. Crew duty times

- 16.3.3.5. Command waivers
- 16.3.3.6. Rules of engagement (ROE)
- 16.3.3.7. EMCON level directed for each phase of flight
- 16.3.3.8. ACWDE requirements
- 16.3.4. Intelligence information.
- 16.3.5. Weather information.
- 16.3.6. Timing and control times to include takeoff and landing times.
- 16.3.7. Review taxi, takeoff, and departure plans to include communications requirements and frequencies.
- 16.3.8. Navigation and flight plan.
- 16.3.9. Threat, special mission tactics.
- 16.3.10. Patient/passenger and cargo load information.
- 16.3.11. Recovery and alternate base.
- 16.3.12. Announcements to include technical order status and changes, flying safety, specialized briefing times and locations, debriefing and interrogation location and procedures, messing, transportation, personal equipment, radio, and communications procedures and crew questions.

**16.4. Crew Mission Study and Detailed Flight Planning.** Intended to acquaint aircrews with the mission and individual sortie requirements to ensure successful mission accomplishment. Wing and squadron staff should monitor crew activity and be able to resolve problem areas. Unit staff should allocate a minimum of 4-hours to accomplish mission planning and mission briefing. This period may be reduced in proportion to the amount of staff and computer prepared mission data available to the crew. However, in no case will mission planning be reduced to less than 1.5-hours. Mission planning should be accomplished as a crew. Unit staff should ensure that other activities do not interfere with mission planning and aircrew mission briefing. In cases where crews plan to brief and fly several missions, from various bases, in a short period of time, the AC will ensure the crew has sufficient time for mission planning.

**16.5. Aircraft Commander Briefing.** See [Chapter 6](#) of this AFI. Conduct after each individual crewmember has completed their mission preparation. All crewmembers will be present unless excused by the aircraft commander. Crewmembers not present must be briefed by the aircraft commander prior to take-off.

**16.6. Specialized Briefing.** See [Chapter 6](#) of this AFI.

**16.7. Weather Briefing.** See [Chapter 6](#) of this AFI.

**16.8. Post Mission Debriefing.** Held immediately after the mission if practical. Include the following:

- 16.8.1. AC should contact the intelligence branch representative when hostile or suspect activity is encountered.

16.8.2. Aircrews should attend the operations and maintenance de-briefings as directed by unit commander. Maintenance de-brief should be conducted ASAP after flight.

16.8.3. A crew critique should be conducted by the AC with the entire crew present.

## Chapter 17

### EMPLOYMENT TRAINING

**NOTE:** Certain technical information was intentionally omitted or generalized to keep this chapter unclassified. Users should be aware that written additions to any portion of this document could cause the manual to become classified.

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

**17.2. Responsibilities.** The tactics ground training program will be a coordinated effort between the wing's IN, Tactics, DOT, OGV, and XP in order to ensure continuity and the unit's specific mission tasking is addressed. The program is the responsibility of the squadron commander and is run by the unit tactics program manager.

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

17.2.2. Threat reference library/tactics read file/tactics newsletter. The unit tactics officer, with IN assistance, is responsible for developing procedures for timely dissemination of tactical and intelligence information to unit crewmembers.

17.2.2.1. Tactics Reference Library should be maintained by the unit tactics officer. This library provides study material at the unit level.

17.2.2.2. A by-subject Tactics guide should also be developed and maintained by Wing Tactics and updated as materials are received.

17.2.2.3. The Tactics Read File should contain classified materials of timely interest to the aircrews. Read file may include messages, magazine articles, sections out of MCM 3-1, Tactical Analysis Bulletins, etc.

### 17.3. Tactics Simulator Training. (if available)

17.3.1. Scope. Aircrews should practice all applicable tactical maneuvers in the simulator prior to attempting the maneuvers in-flight. Units may attempt any maneuver in the simulator.

**NOTE:** Use the simulator for tactics reinforcement. The simulator provides an inexpensive reinforcement and safe means of practicing tactics. Units should tailor the simulator to their specific taskings.

17.3.2. Responsibilities. The tactics simulator training is run by the unit tactics program manager with the help of the squadron training flight. The tactics program manager is responsible to forward

simulator profiles to HQ AMC/DOT, prior to incorporating profile into the simulator period. Because no threat specific information is required for this training, the simulator training is unclassified. Tactics training should be incorporated into refresher training profiles to ensure all crewmembers accomplish the training. The following are suggestions for tactics profiles to be practiced in the simulator:

17.3.2.1. Theater-specific profiles may be developed which have the crews communicating with TALCEs and accomplishing limited threat planning.

17.3.2.2. Tactical Arrival/Departure Training.

#### **17.4. Tactics Flight Training.**

17.4.1. Scope. The tactics flight training program is designed to provide C-9A crewmembers with the training necessary to confidently and successfully survive the wartime threat environment without endangering aircrews or aircraft in peacetime. This chapter attempts to point those maneuvers out to the C-9 community; however, do not attempt any maneuver that is not specifically mentioned in this publication without MAJCOM/DO approval.

17.4.2. Objectives. Flight training is the final phase of the tactics program. Its goal is to combine the information presented from the ground and simulator phases (if available) and provides actual application of the tactics training concepts. Accomplish all flight maneuvers with strict adherence to aircraft limitations as defined in C-9A tech orders and this AFI.

17.4.3. Flight Training Limitations and Restrictions:

17.4.3.1. Limitations. Except during training when under the supervision of a certified instructor, no pilot will accomplish these maneuvers unless they have received training and been certified by the squadron commander/operations officer as proficient. Once certified, aircraft commanders and above may execute these procedures when actual threats dictate their use.

17.4.3.2. VFR Overhead Pattern. For the C-9, primary use of the overhead pattern is expeditious landing of the aircraft when sequencing with recovering fighter traffic. See [Figure 17.1.](#) and the following:

17.4.3.2.1. Limitations: Maximum bank angle 30-degrees, minimum weather VFR (maintain VMC), minimum altitude 1,500 AGL and maximum speed 250 KIAS.

17.4.3.3. Procedures:

17.4.3.3.1. Report 3 to 5 NM initial for landing runway at 1,500-2,000-feet AGL, 230-250 KIAS, on tower frequency.

17.4.3.3.2. Break prior to approach end of runway (when numbers disappear under aircraft nose) unless compensating for known wind or traffic.

17.4.3.3.3. At breakpoint, set power to min spool EPR and initiate turn using 30-degrees bank. If above 1,500-feet AGL, establish slight descent so that 1,500-feet AGL is achieved prior to reaching perch point.

17.4.3.3.4. When aircraft speed reaches 210 KIAS, deploy slats and set flaps to 15-degrees.

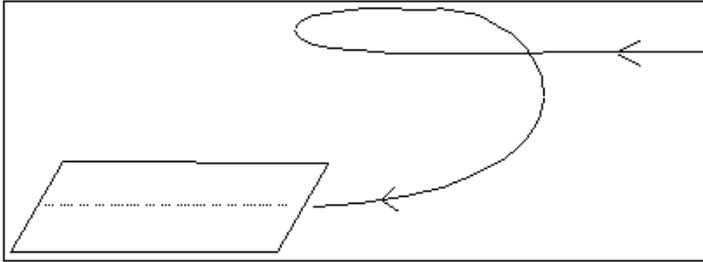
17.4.3.3.5. Lower landing gear after rolling out on downwind. Accomplish Before Landing checklist.

17.4.3.3.6. Deploy flaps to 25-degrees after gear is down and locked.

17.4.3.3.7. Maintain 1,500 AGL minimum on downwind until starting final turn.

17.4.3.3.8. From the perch point through final landing, use normal VFR pattern procedures.

**Figure 17.1. VFR Overhead Pattern.**



17.4.3.4. Random Step Approach. Descending, turning approach initiated from an altitude (typically above 5,000-feet) directly over an airfield. The approach involves multiple spirals over the airfield in order to rapidly lose altitude. See [Figure 17.2.](#) and the following:

17.4.3.4.1. Limitations: Maximum bank angle 30-degrees and minimum weather VFR (maintain VMC).

17.4.3.5. Procedures:

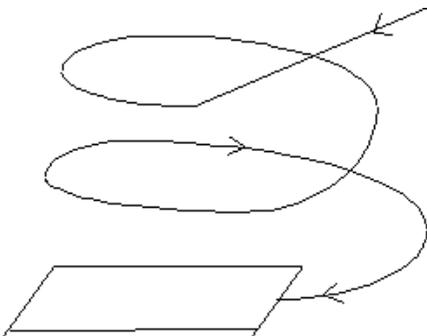
17.4.3.5.1. Establish position directly overhead the airfield (altitude depends on threat).

17.4.3.5.2. Configure with slats, gear, and flaps 50-degrees, and begin right or left spiral turn using maximum 30-degrees of bank, throttles idle. Do not exceed 160 KIAS.

17.4.3.5.3. Engines must be spooled below 1000 AGL.

17.4.3.5.4. From base turn through landing, use normal VFR pattern procedures.

**Figure 17.2. Random Step Approach.**



17.4.3.6. Curvilinear Approach. A descending, turning track from a random altitude, distance, and location from the airfield. See [Figure 17.3.](#) and the following:

17.4.3.6.1. Limitations: Maximum bank angle is 30-degrees and minimum weather VFR (maintain VMC).

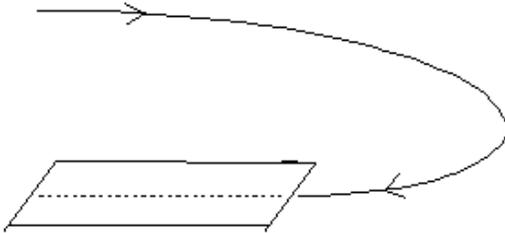
17.4.3.7. Procedures:

17.4.3.7.1. From a position other than normal VFR traffic pattern, configure the aircraft with slats extended, flaps 25-degrees, gear down, prior to the perch point.

17.4.3.7.2. Set power and flaps as required, to maneuver to roll out on final at a normal glide-path in the landing configuration. Do not exceed 1,000 feet-per-minute (FPM) descent rate below 1,000-feet AGL.

17.4.3.7.3. Perform normal landing.

**Figure 17.3. Curvilinear Approach.**



17.4.3.8. Spiral-up Departure. Maximum angle of climb departure used to gain altitude prior to departing a secure perimeter. See [Figure 17.4.](#) and the following:

17.4.3.8.1. Limitations: Maximum bank angle is 15-degrees until reaching  $V_{min}$  for existing configuration.

17.4.3.8.2. Procedures:

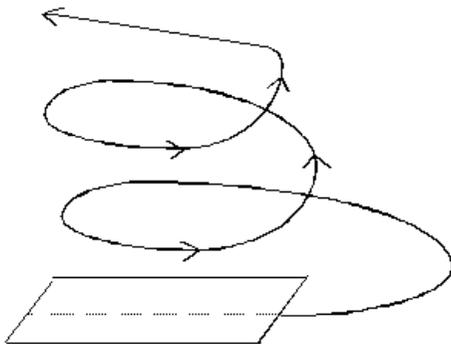
17.4.3.8.2.1. Use normal procedures throughout liftoff.

17.4.3.8.2.2. Raise gear, leave slats extended and flaps at takeoff setting, and climb out at  $V_{min}$  for the flap setting until clear of threat.

17.4.3.8.2.3. Climbout may be straight or turning, (threat location). Do not exceed 15 degrees of bank until reaching  $V_{min}$ . Thereafter do not exceed 30 degrees of bank.

17.4.3.8.2.4. At an altitude above the threat level, lower the nose, accelerate, raise flaps and slats, and continue climb using appropriate procedure (if continued high angle of climb is required, climb at 210 KIAS to 15,000-feet MSL, and 250 KIAS thereafter, otherwise resume normal climb profile).

**Figure 17.4. Spiral-up Departure.**



## 17.5. Exercises.

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

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

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

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

17.5.2.3. A sortie rate of no less than 1.0/day is the goal for deployments.

17.5.2.4. Employ mission planning cell at deployed location.

17.5.2.5. Employ minimum communications deployment package or consider requesting combat communications element.

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

17.5.3. Deploy a tactics officer as staff personnel with the crews selected to participate in the exercise. The tactics officer will augment the AMWC staff supporting ME phase. The tactics officer acquires practical experience in composite force operations.

**17.6. Hostile Fire Entry and Exit Checklists.** Use the Hostile Fire Entry and Exit Checklists at [Attachment 2](#). Each checklist provide the cockpit and cabin crew a means of placing the aircraft into a configuration which is most survivable as possible (if the aircraft sustains ground fire).

17.6.1. Units will locally reproduce these checklists for inclusion in the aircrew's handheld checklists (as an inserts) according to AFI 11-215, *Flight Manual Program (FMP)*, and MAJCOM supplement.

17.6.2. The aircraft commander will initiate the Hostile Fire Entry checklists not later than 30 minutes before entering the threat area. Timely communication of threat sightings by observers to the pilots is critical. The aircraft commander will direct crewmembers to complete the Hostile Fire Exit checklists when the aircraft is clear of the threat area.

## Chapter 18

### INTENTIONALLY LEFT BLANK

**18.1.** This chapter is not used for C-9A operations (Formation).

**Chapter 19****INTENTIONALLY LEFT BLANK**

**19.1.** This chapter is not used for C-9A operations (Airdrop).

**Chapter 20**

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**20.1.** This chapter is not used for C-9A operations.

**Chapter 21****INTENTIONALLY LEFT BLANK**

**21.1.** This chapter is not used for C-9A operations (search and rescue).

**Chapter 22**

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**22.1.** This chapter is not used for C-9A operations.

## Chapter 23

### AIRCREW CHEMICAL OPERATIONS AND PROCEDURES

**23.1. Wear of Aircrew Chemical Defense Ensemble (ACDE).** Wearing the ACDE will constrain normal aircraft operations. The ACDE includes the newer Aircrew Eye-Respiratory Protection System (AERPS) above the shoulder system and the CWU-66/P or -77/P Integrated Aircrew Chemical Coverall (IACC). Procedures and equipment have been tested under restricted conditions, and "business as usual" will not be possible. Individual situations dictates what can and cannot be done. To properly adapt, aircrews must understand hazards involved and the limitations of their chemical defense equipment.

23.1.1. This volume is intended to enhance other aircrew chemical defense training and provides the crewmember a basic understanding of utilizing ACDE in a chemical-biological threat area (CBTA). It combines information from technical orders and unit inputs to form a single source document.

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

### **23.2. Factors Influencing the Chemical Warfare (CW) Agent Hazard.**

23.2.1. The major instances in which a crew may be exposed to chemicals is through inhalation, absorption through the skin, eyes, and ingestion. Contaminated drink and food are considered harmful, but immediate concerns must be contamination avoidance to the maximum extent, limit exposure of the skin and eyes, as well as avoid breathing the contaminants. Factors affecting persistence are weather, agent physical characteristics, method of dissemination, droplet size, and the terrain.

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

23.2.3. Agent Dissemination. Disseminated as vapors, aerosols, or liquids. Solids seem unlikely, but agents may become solids at lower temperatures.

23.2.4. Agent Droplet Size. Persistence factor is determined by droplet size. Agents may be mixed with other chemicals ("thickeners"), and form large drops making removal more difficult.

23.2.5. Surface and Terrain. CW agent clouds tend to follow the terrain, flowing over countryside and down valleys. Chemicals persist in hollows, depressions, and other low areas. Rough terrain retards cloud movement. Flat countryside allows a uniform, unbroken cloud movement. Vegetated areas are more contaminated than barren terrain. Liquid agents soak into porous surfaces, making evaporation much slower than for non-porous surfaces.

**23.3. Categories of Chemical Warfare Agents.** CW agents having military significance may be categorized as nerve, blister, choking, and blood. Because they are produced biologically, toxins technically are not chemical agents. However, they are considered a potential CW threat.

### 23.4. Nerve Agents.

23.4.1. Military Significance. Nerve agents are the most lethal and fastest acting of the standard CW agents. These agents affect the nervous system and are highly toxic whether inhaled, ingested, or absorbed through the skin. Persistency ranges from hours to many days.

23.4.2. Symptoms of Exposure. Nerve agent exposure is difficult to distinguish. Normally, symptoms of nerve agent exposure appear in the following order. Initial exposure includes a runny nose, tightness of the chest, dimness of vision, and pinpointing of the pupils. These symptoms are usually followed by difficulty in breathing, drooling, involuntary defecation and urination. Finally, exposure will lead to confusion, drowsiness, convulsions, coma and death.

23.4.3. Onset of Symptoms. Lethal respiratory dosages will cause death in 1 to 10-minutes and liquid exposure to the eyes will kill almost as rapidly. Depending on factors such as the amount and type of nerve agent, absorption through the skin may cause death anywhere from 1 to 2 minutes to 1 to 2-hours. Nerve agents are retained by the body for an extended period; thus intermittent, cumulative exposure to low amounts can lead to the same ultimate effect as a single exposure to a higher amount.

23.4.4. Protection. The full protective ensemble is effective against nerve agents. When properly worn, the various chemical protective masks prevents inhalation of nerve agents. Both the aircrew coveralls and ground crew ensemble provide limited protection to the skin. All layers of the outer garment must be protected against saturation of liquids, chemical agents, water, or petroleum.

23.4.5. Antidotes/Prophylaxis. Antidotes are effective in combating effects of nerve agent exposure. These antidotes may be effective if given to a victim having advanced symptoms, and as long as the victim is made to continue breathing. People who use the antidotes must be seen by medical personnel and may not be combat-ready for several days. Currently, nerve agents are the only agents where there is an available field antidote. This antidote can be self-administered by the exposed individual or through self-aid buddy care. In addition, medical personnel have more specialized treatments available.

### 23.5. Blister Agents.

23.5.1. Military Significance. Blister agents are dispensed as vapors or liquids, and may be encountered as solids. These agents primarily affect the eyes, respiratory tract, and the skin.

23.5.2. Symptoms of Exposure. Placed on the skin, a drop the size of a pinhead can produce a blister one inch in diameter. This action is accentuated by moisture; hence, a more severe danger is present during periods of sweating. The groin and armpits, which tend to be sweaty, are especially susceptible to blister agents. Blister agents which come in contact with the eyes lead to redness, watering of the eyes, blurring of vision, sensitivity to light, and frequently, blindness. Inhalation causes serious damage due to burns and blisters to the mouth, nose, throat, and lungs. Incapacitation may last for days or weeks; aircrews will probably be unable to fly for indefinite periods. After hospitalization, complications from blister agent exposure can arise and may be fatal.

23.5.3. Onset of Symptoms. Blister agents are quickly absorbed through the skin. However, it usually takes several minutes (up to five minutes and as long as several hours) for the symptoms to appear. They act most rapidly in liquid form, but are also effective in vapor form.

23.5.4. Protection. The full protective ensemble is effective against blister agents. Exposed areas must be cleaned thoroughly immediately after exposure. Blister agents are easily transferred from contaminated surfaces, thus great care must be taken to avoid contact with any contamination.

### 23.6. Choking Agents.

23.6.1. Military Significance. These agents are disseminated as vapors and when inhaled affect the respiratory system by damaging the lungs. Persistence is very brief, and dissipate rapidly (within minutes) under most field conditions.

23.6.2. Symptoms of Exposure. Choking agents cause coughing, choking, tightness of the chest, nausea, headache, and watering of the eyes. Choking agents can be lethal, with death normally from the lungs filling with fluids, making breathing difficult or impossible.

23.6.3. Onset of Symptoms. Exposure to choking agents has an immediate effect. Victims experience slightly delayed effects, such as painful cough, breathing discomfort, and fatigue.

23.6.4. Protection. Both the aircrew and ground crew protective mask is extremely essential to protect against exposure; the entire protective ensemble should be used as directed.

### 23.7. Blood Agents.

23.7.1. Military Significance. Blood agents are usually dispensed as vapor or aerosol and inhaled. Under most field conditions they may briefly persist on target (up to 10-minutes).

23.7.2. Symptoms of Exposure. Exposure to a single breath of blood agent causes giddiness, headaches, confusion, and nausea. As dose increases, breathing becomes more difficult. The victim will have deep, uncontrollable breathing and cramps, then loss of consciousness. Death is certain if the victim receives no medical aid.

23.7.3. Protection. Blood agents are breathing hazards. The full ensemble is most effective because the mask provides the breathing protection needed.

23.7.4. Additional Threats. Blood agents will damage mask filters. All personnel must change mask filters at the earliest possible opportunity after a blood agent attack.

**EXCEPTION:** Filters installed in aircrew CRU-80/P filter packs will be removed and replaced by aircrew life support (ALS) personnel (AFSC 1T1X1).

**23.8. Aircrew Operations.** Performance of duties while wearing chemical defense equipment can be extremely physically and mentally demanding. Special preparation and crew coordination are required to operate under chemical conditions. The information presented here will enable the aircrew to successfully operate in a chemical environment by recognizing limits and exploiting the capabilities of the chemical defensive equipment.

#### 23.8.1. Planning:

23.8.1.1. Non-flying Ground Operations. Ground operations can represent the highest threat to aircrew safety. Protection from enemy attacks and exposure to liquid chemical agents is paramount. Aircrew should be advised to limit activities to essential duties only, and to separate ground duties from air duties. The ground ensemble is designed for quick donning and heavier levels of concentrations that can be more evident during ground operations. The aircrew ensemble

is designed for the unlikely event of light concentration levels, that could be found during flying operations and transmitted to and from the aircraft. In addition, ACDE requires care during donning using "buddy dressing" procedures and ALS expertise during aircrew contamination control area (ACCA) processing.

23.8.1.2. Equipment Limitations. Due to thermal stress and the degraded performance associated with wearing of the ACDE, it is highly desirable to minimize the time and number of personnel exposed to chemical agents. Crewmembers must be familiar with the limitations of the ACDE and properly plan their duties. ACDE is designed to protect against vapor agents only and the mask and hood assembly can not be donned quickly in time of attack.

23.8.1.3. Body Temperature/Fluids Control. Heat stress and dehydration are serious hazards while wearing the ACDE. Crewmembers need to control perspiration rates and limit activities to essential duties only. The need to consciously slow the work pace while performing physical labor, share workloads and monitor each other's physiological condition is essential.

23.8.1.4. Breathing Restrictions. One of the inherent characteristics of the filter assembly is moderate breathing resistance. Normally, this is most noticeable during high flow rates. For example during physical exertion, users should be aware of the possibility of hyperventilation. During flying operations resistance can be reduced by using the EMERGENCY position on the oxygen regulator. The Valsalva maneuver cannot be performed while wearing the MBU-13/P mask, therefore alternate means such as yawning or chewing can be used. If these are unsuccessful, attempt to clear ears by holding the oxygen regulator in the TEST MASK position and forcefully exhale or yell against the regulator pressure. The new AERP mask/hood assembly incorporates a blower system that presents less-than-moderate breathing resistance. However, in the event of a blower system failure, aircrews will experience an increase in breathing resistance.

23.8.1.5. Limited Dexterity. Wearing three pairs of gloves restricts dexterity, therefore visual confirmation of switch selection/positioning becomes very important.

23.8.1.6. Restricted Communications. Normal communications are limited while wearing the chemical defense mask. Communications can be enhanced by using the mini-amplifier/speaker with the AERP and some of the newer ground masks may be issued with a built-in amplifier. Otherwise, visual signals and the public address system of the aircraft can be used to compensate.

23.8.1.7. Peripheral Vision Limits. The aircrew chemical defense mask may reduce peripheral vision as much as 15 percent.

**23.9. Limitations.** Aircrews must be mentally prepared to face the dangers of chemical weapons. Flight planning must be thorough and aircraft commanders should emphasize chemical defensive operations during mission planning, hazards and countermeasures, plans for onload/offload in the event of a ground attack, and plans for the return leg in the event of a contaminated aircraft. Alternate scenario plans should also be considered in the event conditions change.

23.9.1. Fuel Requirements. Extra fuel may be needed to compensate for altitude restrictions as the result of chemical agent exposure. If the aircraft has contamination, follow procedures outlined in paragraph 23.16. During purge periods, the aircraft will be unpressurized. Although the aircrew can use the aircraft oxygen systems, passengers wearing the ground crew ensemble (GCE) cannot. This restricts the aircraft cruise altitude and increases fuel requirements.

23.9.2. Oxygen Requirements. Operating into a CBTA will increase oxygen requirements. The aircrew may be required to rely on the aircrew chemical defense mask and aircraft oxygen system to counter actual/suspected chemical contamination. Using the 100 percent oxygen setting offers the greatest protection in a contaminated environment. Appropriate oxygen reservoir levels must be planned to meet higher consumption rates. Use the aircraft -1 charts to calculate the required reservoir levels.

23.9.3. Mask/Filter Assembly Limitations. Wearing any of the chemical defense masks/filter assemblies imposes the following limitations:

23.9.3.1. The mask/filter assembly prevents the detection of fumes from fuel, hydraulic fluid and oil.

23.9.3.2. The filter assembly will not protect the user against ammonia fumes and carbon monoxide gas.

23.9.3.3. The filter/mask assembly should not be used without an oxygen source in an oxygen deficient atmosphere.

**23.10. ACDE Issue and Medical Pretreatment.** Aircrews will be issued sized ACDE and GCE at home station. Aircrews will ensure their ACDE and GCE is available at all times while in a CBTA. During deployments, at least one ACDE and one GCE will be issued to each crewmember as directed by the unit commander or HQ AMC/TACC. ALS technicians will prepare and issue mobility ACDE "D" bags for crewmembers (Reference AMCI 11-301, *Aircrew Life Support (ALS) Program* (chapter 4 and 6). Mobility processing personnel will issue GCE "C" bags. Crewmembers will confirm the mobility bag contents and correct sizes.

### **23.11. Operations in a Chemical-Biological Threat Area (CBTA).**

23.11.1. Establishing Threat Level. Aircrews should monitor C2 channels to ensure they receive the latest information concerning the destination's alert condition. Diversion of AMC aircraft to alternate "clean" locations may be required, unless operational necessity dictates. The local AMC C2 Center will direct aircrews to undergo medical pre-treatment for chemical exposure.

23.11.2. Protective Equipment Postures. Standardized USAF alert conditions and recommended ACDE requirements are listed below based on a chemical-biological threat.

**NOTE:** These alarms may be different based on the host country requirements.

23.11.2.1. "ALL CLEAR" Attack is not probable, nor is chemical-biological contamination present. Notification--Verbal; removal of warning flags/placards. ACDE requirements--equipment is issued, prepared for flying, and kept readily available. GCE requirements--equipment is issued, prepared, and readily available.

23.11.2.2. "ALARM YELLOW" Attack is probable. Notification--Verbal; posting of yellow warning flags/placards. ACDE requirements--if en route to fly or during flying operations, all components will be worn except mask and hood, gloves, overcape, and overboots. GCE requirements--appropriate components should be worn with the mask/hood immediately available commensurate with ground duties.

23.11.2.3. "ALARM RED" (ALARM BLUE for Korean Theater). Attack is imminent or in progress. Notification--Verbal; posting of red warning flags/placards; one minute warbling tone

on siren (3 seconds on-1 second off). ACDE requirements--full ACDE will be worn for flying duties. GCE requirements--full ensemble should be worn commensurate with ground duties. Personnel will take immediate cover.

23.11.2.4. "ALARM BLACK". Contamination is suspected or present. Notification--Verbal; "Gas - Gas - Gas"; posting of black warning flags/placards; warbling tone on siren (1 second on-1 second off). ACDE requirements--full ensemble will be worn. GCE requirements--full ensemble will be worn commensurate with ground duties. Personnel will remain indoors or under liquid agent cover.

**23.12. Donning Equipment.** Aircrew will don ACDE based on the alarm condition. Use the "buddy dressing" procedures, and refer to AMCVA 36-2206, *ACDE Donning Checklist* to ensure proper wear. When wearing the ACDE, Atropine and 2 PAM Chloride auto injectors will be kept in the upper left flight suit pocket. This standardized location will allow personnel to locate the medication should an individual be overcome by nerve agent poisoning. M-9 paper on the flight suit will facilitate detection of liquid chemical agents and ACCA processing. M-9 paper should be placed on the flight suit prior to entering a CBTA when an alarm "yellow" or higher has been declared. When inbound to CBTA, prior to descent, the aircraft commander will ensure crew and passengers don appropriate protective equipment IAW arrival destination's mission oriented protective posture (MOPP) level and brief aircrew operations in the CBTA. As a minimum, this briefing will include: flight deck isolation, oxygen requirements, air conditioning system requirements, CW clothing requirements, ground operations and MOPP levels.

### **23.13. Ground Operations.**

23.13.1. Off/On Considerations. Extreme care must be exercised to prevent contamination of aircraft interiors during ground operations, particularly to the flight deck area. Reduce the number of personnel entering the aircraft. Contaminated engine covers, safety pins and chocks will not be placed in the aircraft unless sealed in clean plastic bags. Onload cargo will be protected prior to and while being transported to the aircraft. Protective covers will be removed just prior to placing the cargo on the aircraft. It is the user's responsibility to determine and decontaminate equipment in his/her charge. Crewmembers entering the aircraft will remove plastic overboots and overcape portions of the aircrew ensemble and ensure flight/mobility bags are free of contaminants and placed in clean plastic bags. Aircrew exiting aircraft into a chemically contaminated environment will don plastic overboots and overcape prior to leaving the aircraft.

23.13.2. Physiological Factors. Aircraft commanders must be very sensitive to the problems resulting from physical exertion while wearing ACDE. The aircraft commander should consider factors such as ground time, temperature and remaining mission requirements when determining on/offload requirements. Individuals involved should be closely monitored for adverse physiological effects.

23.13.3. Communications. Conducting on/offloading operations while wearing the complete ACDE complicates communications capability. Use the mini-amplifier/speaker or the aircraft public address system and augment with flashlight and hand signals as required.

23.13.4. Passenger/Patients. A path should be decontaminated between the aircraft and the ground transportation vehicle to reduce interior decontamination when loading/unloading passengers/patients.

**23.14. Chemical Attack during Ground Operations.** If an attack (Alarm Red) occurs during on/off-loading operations or transport to and from aircraft, take immediate cover away from the aircraft/vehicle. Follow "buddy dressing" procedures to ensure proper donning of ACDE prior to flight.

**NOTE:** Aircrews should don the ground crew protective chemical mask and protective helmet, consistent with circumstances and duties. Aircrews could be expected to forward information concerning medical aid, damage estimates, unexploded ordinance. Appropriate information may be forwarded via the aircraft radios to the controlling agencies.

**23.15. Crew Rest Procedures.** Operational necessity may require the aircrew to rest/fly in a contaminated CBTA. If the mission is not being staged by another aircrew or preflight crews are not available, the aircrew will normally preflight, load, and secure the aircraft prior to entering crew rest. The departing aircrew will perform necessary crew preparations and preflight briefings, then report to the ACCA for processing with assistance from ALS personnel who will assist aircrews donning ACDE prior to reassuming flying duties. If possible, aircrew transport should be provided in a covered vehicle. Aircrews should avoid pre-flying aircraft prior to departure to prevent contamination to themselves and the aircraft. As aircrews proceed to fly they will require assistance from ground support personnel in removing their aircrew protective overcape and overboots prior to entering the aircraft.

**23.16. Outbound with Actual/Suspected Chemical Contamination.** Venting Aircraft/Removing ACDE Components: With actual/suspected vapor contamination, the aircraft must be purged for 2 hours using Smoke and Fume Elimination procedures. To ensure no liquid contamination exists, a close inspection of aircrew, passenger ensembles, and cargo will be conducted using M-8 and M-9 detection paper. M-8 and M-9 detection paper only detects certain liquid agents and will not detect vapor hazards. Above the shoulder ACDE may be removed only if the presence of vapor/liquid agents are not detected or suspected. The aircrew must take every precaution to prevent spreading of liquid contaminants, especially on the flight deck area. The best course is to identify actual/suspected contamination and physically avoid those areas for the remainder of the flight and keep cargo compartments cool. If a crewmember or passenger has been in contact with liquid contaminants, all personnel aboard the aircraft will stay in full ACDE/GCE until processed through their respective contamination control area (CCA).

**23.17. Communicating Down-line Support.** Pass chemical contamination information through C2 channels when inbound. This information will be used to determine if a diversion flight is required or decontamination teams are needed. Report the physical condition of any crew/passengers who are showing chemical agent symptoms and whether they are wearing chemical defense ensembles.

**23.18. Contamination Control Areas (CCA) Procedures.** Aircrews will proceed to the ACCA for processing. Ground personnel will report to the ground crew contamination control area (GCCA) for processing. All personnel will remove protective clothing IAW established procedures located in respective CCA's.

**NOTE:** Because of the technical characteristics of life support/flying equipment and mission essential aircrew resources, an ACCA is required to ensure minimum exposure to contaminants. GCCA's are generally used to process ground crew personnel and typically are subject to potentially higher concentration levels. The ACCA is equipped and manned by trained ALS personnel to process aircrews and decontaminate their equipment.

**23.19. Work Degradation Factors.** Work timetables need to be adjusted to minimize thermal stress caused by wearing the ACDE. Aircrews must weigh all factors when performing in-flight and ground duties. The following are degradation factors for wearing full GCE, and may also be used to represent the Task Time Multipliers for the ACDE. To estimate how much time it takes to perform a task or operation, (1) take the Task Time Multiplier for the appropriate Work Rate and ambient air temperature and (2) multiply it by the time it normally takes to perform the task. For example, given a heavy work rate and an air temperature of 70F, the crewmember should expect a normal one hour task to take 2.1 hours while wearing ACDE. A more extensive discussion of this subject is found in AFMAN 32-4005, *Personnel Protection and Attack Actions*.

**Table 23.1. Task Time Multipliers.**

Work Rate	Temperature		
	20-49F	50-84F	85-100F
Light	1.2	1.4	1.5
Moderate	1.3	1.4	3.0
Heavy	1.7	2.1	5.0

**Chapter 24****INTENTIONALLY LEFT BLANK**

**24.1.** This chapter is not used for C-9A operations.

## Chapter 25

### C-9A CONFIGURATIONS

#### 25.1. General.

25.1.1. This chapter establishes basic planning factors to be used by planners at all levels of command and directs C-9A aircraft configuration for local or training missions, worldwide and contingency operations, and commanders distinguished visitor program operations.

25.1.2. This chapter will be used by all units/agencies involved in preparing the C-9A aircraft for deployment in support of contingency and other operations.

**25.2. Applicability.** This chapter is applicable to all individuals operating and/or supporting C-9A aircraft.

**25.3. Concept.** C-9A deployments may be of short duration with immediate return to home station, or be to a specific location for an extended period of time to provide air refueling and airlift support for general purpose forces and strategic conventional forces. Subordinate commanders must be prepared to deploy associated equipment, personnel, and materials.

#### 25.4. Key Configuration Words.

25.4.1. Assembly Staging Base. Base where C-9A aircraft composing the force assemble.

25.4.2. Contractor-Operated and Maintained Base Supply (COMBS). Contractor supply facility for C-9A aircraft parts. It is also focal point for all contractor operations.

25.4.3. Forward Operating Location (FOL). Base or area in a forward location from which the aircraft is operated.

25.4.4. Logistics Support Contractor (LSC). Contractor responsible for providing logistics support to an Air Force aircraft.

25.4.5. Main Operating Base (MOB). A permanent operating location, where all operational and logistics support is available.

25.4.6. Mission Support Kit (MSK). Transportable package of spares and support equipment to support C-9A operations at a FOL.

25.4.7. Unit Type Code (UTC). A 5-letter or -digit combination code used to identify deployable forces. It describes personnel, associated equipment, and requirements for operation plan tasking and identification.

**25.5. Aircraft Configuration.** Unit level operations, maintenance and support functions must ensure C-9A aircraft are properly configured in accordance with this chapter. Configuration codes designate the setup of the aircraft. Options for each configuration determine the available space for patients, passengers and cargo.

25.5.1. Normal configuration for local or training missions is at the unit's discretion.

25.5.2. All aircraft will be configured for deployment as required by implementing fragmentation (FRAG) or operations order (OPORD).

25.5.3. After configuration has been determined, the Production Superintendent will be the single point of contact to ensure required configuration actions are completed and verified by tasked agency.

25.5.4. Aircraft configuration at all en route stops is the responsibility of the aircraft commander.

25.5.5. MSKs will be carried when required.

25.5.6. On a temporary basis, additional equipment may be required to satisfy mission requirements. When required, the tasked unit must assure that coordination includes appropriate functional areas and that additional equipment is onboard.

**25.6. Configuration Procedures and Responsibilities.** Unit will determine the most suitable aircraft for deployment based on implementing operation or FRAG order. Unit supervisors are responsible for ensuring that required items are carried onboard aircraft as required. Excess quantities of these items will not be carried without the Production Superintendents approval, unless specifically directed by deployment orders or required for the deployment by unit supervisors.

25.6.1. Weight and Balance. Unit weight and balance personnel will ensure accuracy and currency of chart "C." For each aircraft, if a nonstandard configuration is required, the weight and balance data will be provided by weight and balance personnel.

**25.7. Not Used.**

**25.8. Not Used.**

**25.9. Responsibilities.** This section describes responsibilities and requirements (by functional area) and provides specific guidance necessary for mission accomplishment. Exceptions will be specified in operations or FRAG order. Planning responsibilities will be in accordance with current directives.

25.9.1. Logistics Plans. The unit logistics plans function will be the single focal point for all logistics support planning for deployment operations. They will:

25.9.1.1. Maintain close coordination with the unit operations plans function and all logistics functions to ensure all logistics support requirements are met.

25.9.1.2. Obtain specific support capabilities available at deployment location and relay this information to maintenance and operations plans to be used during mission support planning.

25.9.1.3. Monitor all deployments to ensure adequate support is provided or drawn from the functional areas tasked.

25.9.2. The operations group will provide the logistics plans function with information pertaining to aircraft configuration.

25.9.3. Supply. C-9A supply support is provided primarily by civilian contractor logistics support system represented at base level by the COMBS. The COMBS manager must be made aware of the following information for all deployments away from the MOB to ensure appropriate range and quantity of items are included in the onboard support kit:

25.9.3.1. Date and length of deployment

- 25.9.3.2. Number of aircraft involved
- 25.9.3.3. Number of sorties and flying hours planned
- 25.9.3.4. Location of FOL
- 25.9.3.5. Peculiar support equipment requirements

**NOTE:** If security considerations preclude the COMBS manager from access to any of the above information, he or she must be made aware of appropriate supply levels and military port where material is to be shipped.

25.9.4. Logistics Support Contractor (LSC). LSC is responsible for assembly of ESKs and MSKs. Quantities in kits may vary based on mission requirements. Maintenance will provide information required and work with COMBS manager to determine spares requirements.

25.9.5. Senior Maintenance Supervisor. The senior maintenance supervisor is responsible for the deployed support kit and deployed support equipment. If required, contractor personnel may be deployed to manage the support kit at the FOL. These personnel must have valid security clearances and passports as required by C-9A logistics support contracts. The designated kit manager will accept accountability prior to deployment.

25.9.5.1. Items not available in the deployed kit. Contractor-Furnished items generated by not mission-capable supply (NMCS) status and partially mission-capable supply (PMCS) status will be relayed through AMC LGRC to the MOB maintenance aircraft control center (MACC). The MOB MACC will relay requirements to production supervisors who will coordinate the requirements with the COMBS. Coordination is the responsibility of the senior maintenance team chief at the deployed location. Air Force supply items will be handled through the Air Force supply system. Re-supply of ESKs and MSKs will be handled through AMC LGRM.

25.9.5.2. Accountability for deployed aircrew life support equipment will be in accordance with AFMAN 23-110, Volume 2.

**25.10. Aircraft Maintenance.** The maintenance concept is based on providing an organizational level maintenance capability. It provides preflight, launch, post-flight, recovery capability, and limited specialist support for line replaceable unit (LRU) removal and replacement. Deployed forces will use maintenance support at the deployed location if compatible with aircraft systems. The C-9A deployment maintenance supervisor will supervise and control aircraft maintenance. Maintenance requirements beyond the capability of the deployed personnel will be referred to AMC LGRC for coordination with MOB unless specified in operations order.

25.10.1. Status reporting will be in accordance with AFI 21-103. Aircraft possession will not normally be transferred to an operating location.

25.10.2. Aircraft selected for deployment should be identified as early as possible. Selection should be based on present and past performance and known scheduled maintenance and depot requirements.

25.10.3. C Check and paint (depot) schedules are planned and accomplished by the logistic support contractor. Aircraft deployed will be replaced in order to make scheduled depot input. If aircraft cannot be replaced it must be returned for depot. Operational requirements will not interrupt the depot schedule.

25.10.4. Aircraft will not deploy with an engine that requires removal for expiration of maximum operating time or reconditioning interval during deployment tasking.

25.10.5. Spare engines may be deployed in the basic UTC as specified in the implementing FRAG order.

25.10.6. An operational APU is required for all deploying aircraft unless waived by MAJCOM/DO (see **Chapter 4**, Waiver Protocol).

25.10.7. Units will send an adequate supply of engine conditioning monitoring forms per aircraft to cover entire deployment.

25.10.8. One complete set of technical orders for the aircraft will be deployed to support FOL operations. Technical order requirements for other than FOL operations will be determined by the MOB.

**25.11. Deployed Personnel.** Personnel will be deployed based on the C-9A UTC. UTCs may be tailored to meet operational requirements.

25.11.1. For a local training mission, maintenance personnel are not normally required.

25.11.2. All deploying personnel who require access to the flight line will possess AF Form 1119, **Air Force Entry Control Card**.

25.11.3. Deploying maintenance personnel will deploy with the required tool kits.

25.11.4. Deploying personnel must be qualified in accordance with AMCI 21-101, *Maintenance Operations and Management Policy* or appropriate MAJCOM guidance.

25.11.5. When deemed necessary by the LG commander, LSC personnel may be deployed. Deployment onboard United States Air Force aircraft is authorized.

**25.12. Support Equipment.** Support equipment not in the MSK will be deployed in accordance with the UTC. Requirements may be tailored to meet mission requirements. Maximum utilization of equipment already at the FOL is required.

**25.13. Maintenance IAU Responsibilities.** Maintenance will store, control, repair and be accountable for all IAU equipment. They will prepare, load, unload, arrange, and secure IAU equipment onboard aircraft as required by designated configuration.

**25.14. Aircrew Life Support Equipment.** Aircrew life support equipment management will be in accordance with AFI 11-301.

**25.15. Transportation.** Mission support cargo and passengers for C-9A missions not directed or controlled by the TACC will be arranged by operating wing. All passenger and cargo movement will be referred to the base aerial port squadron transportation office (or airlift support squadron on non-AMC bases) for required action or support.

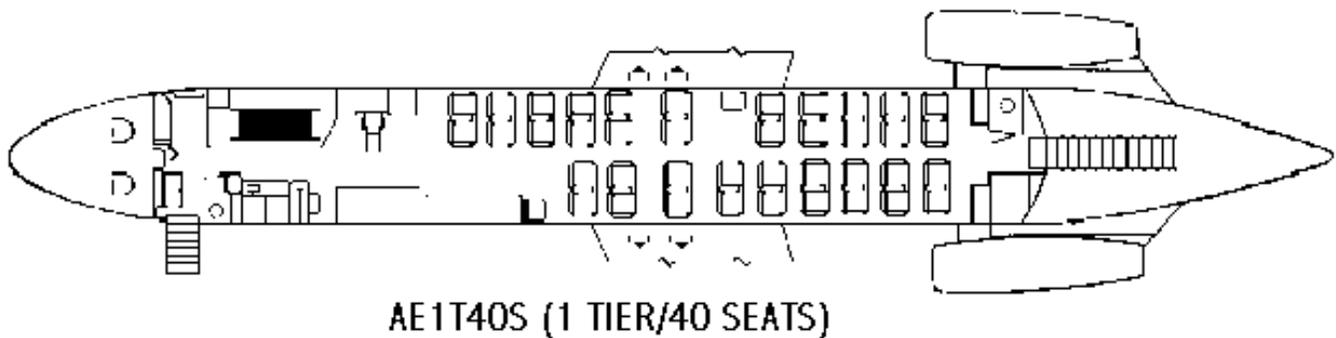
25.15.1. Transportation and aerial port load team personnel may conduct loading and unloading of aircraft support equipment (i.e. MSK, etc.) without supervision after coordinating with the C-9A aircraft commander. The types of C-9A support equipment that will be loaded or unloaded without supervision will be fully coordinated between transportation, the aerial port, and operations, and a resulting list will be provided.

25.15.2. Passenger processing (which includes booking, check-in, anti-theft and anti-hijacking procedures, baggage weighing, tagging and loading, and manifesting and boarding passengers) will be accordance with MAJCOM requirements and this instruction. Mobility deployments will be in accordance with base mobility plan.

25.15.3. The base air freight section is responsible for receipt and manifesting of cargo.

**25.16. C-9A Configurations.** Use interior arrangements in [Figure 25.1.](#) through [Figure 25.13.](#), as appropriate.

**Figure 25.1. C-9 Configuration--AE1T40S.**



**Figure 25.2. C-9 Configuration--AE2T36S.**

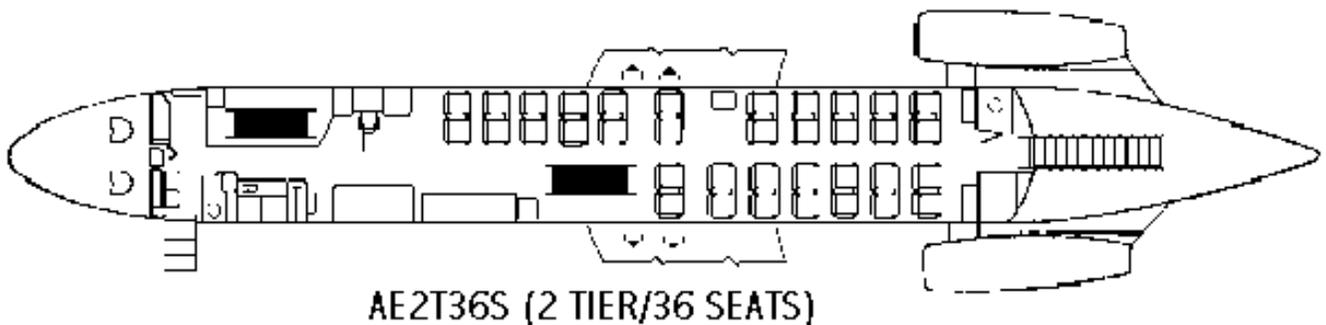


Figure 25.3. C-9 Configuration--AE2T34S.

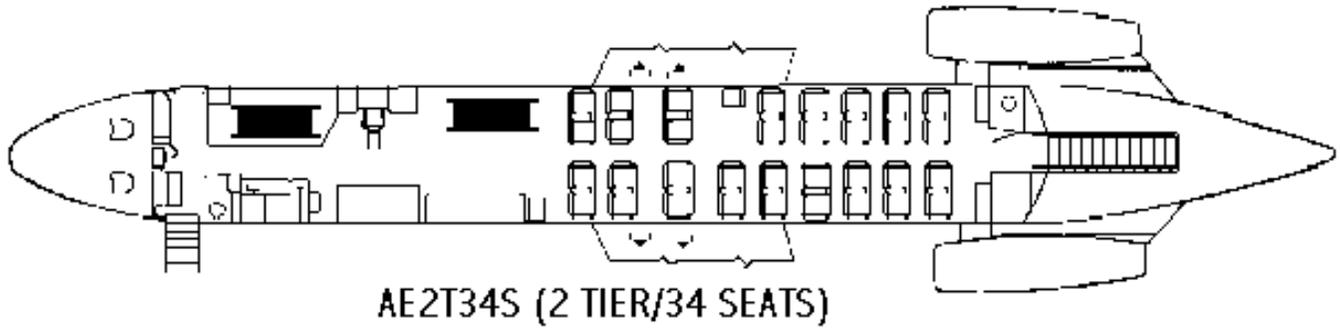


Figure 25.4. C-9 Configuration--AE3T34S.

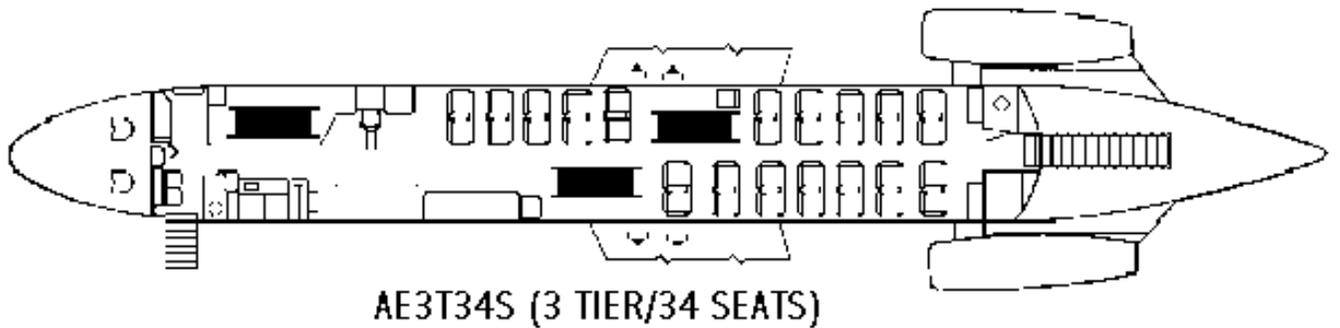


Figure 25.5. C-9 Configuration--AE3T30S.

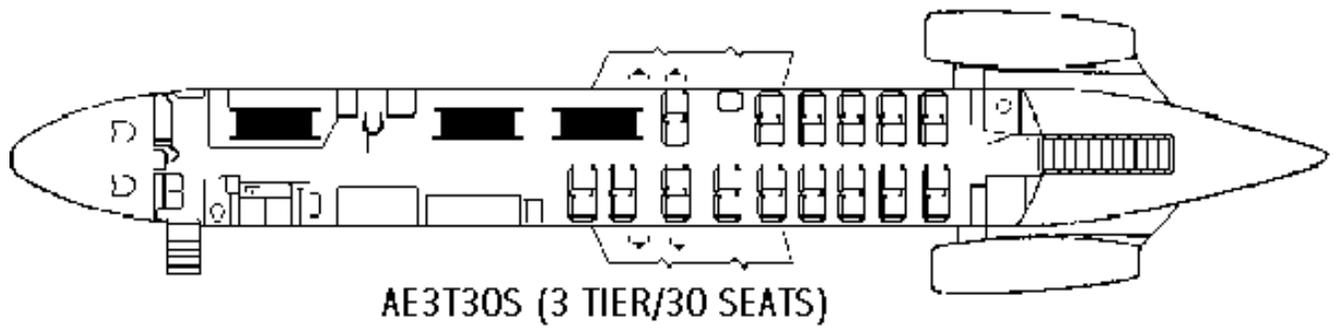


Figure 25.6. C-9 Configuration--AE4T28S.

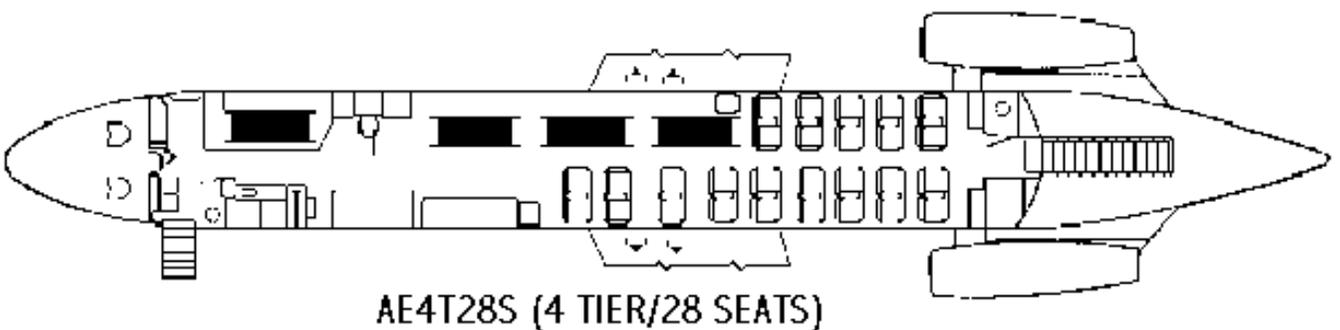


Figure 25.7. C-9 Configuration--AE4T26S.

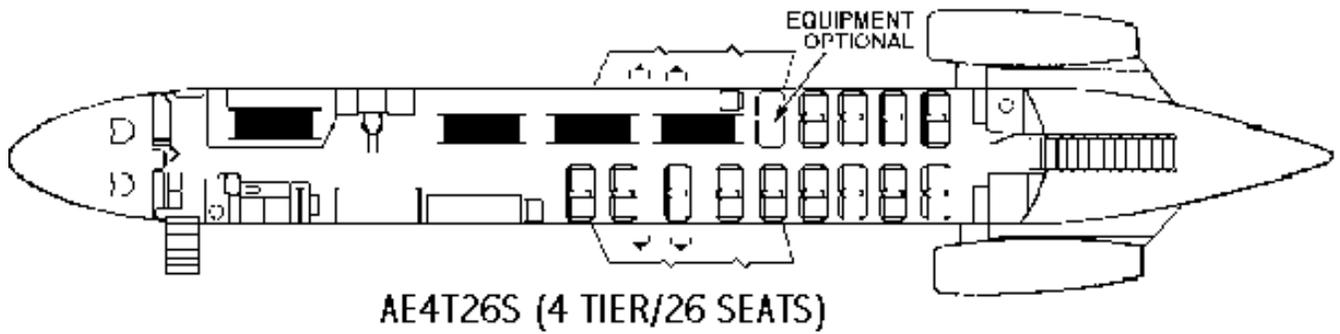


Figure 25.8. C-9 Configuration--AE5T24S.

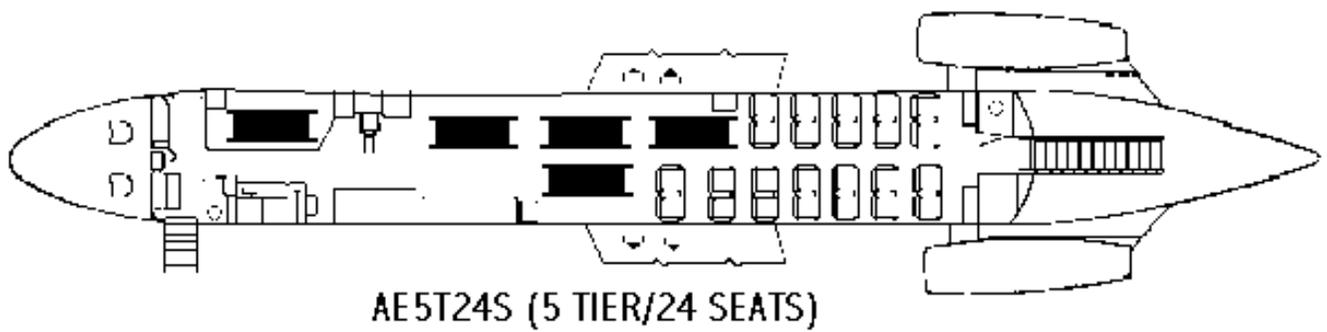


Figure 25.9. C-9 Configuration--AE6T20S.

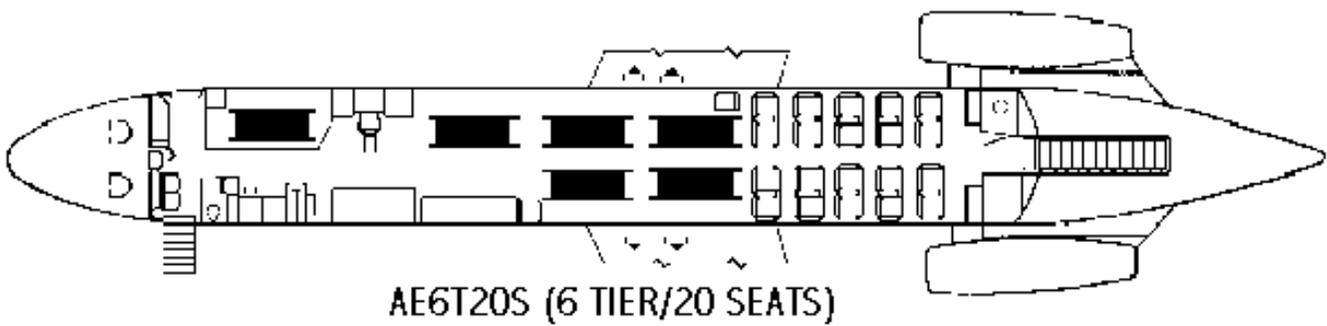


Figure 25.10. C-9 Configuration--AE7T14S.

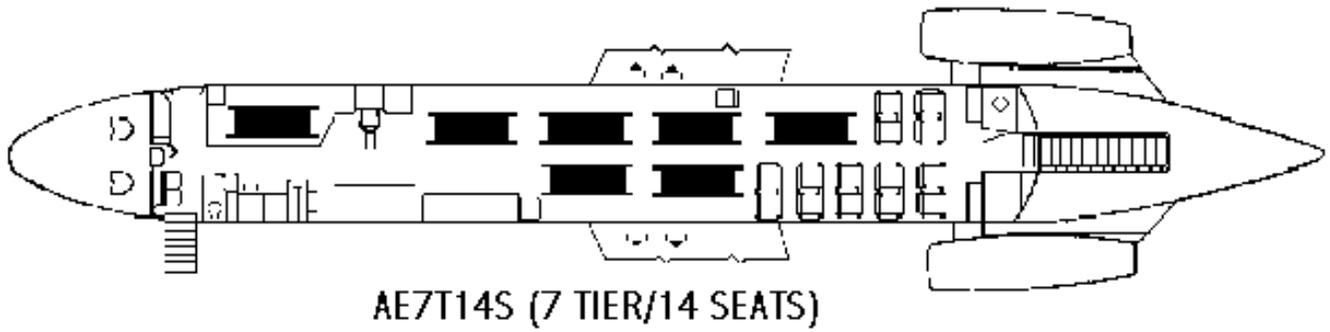


Figure 25.11. C-9 Configuration--AE8T10S.

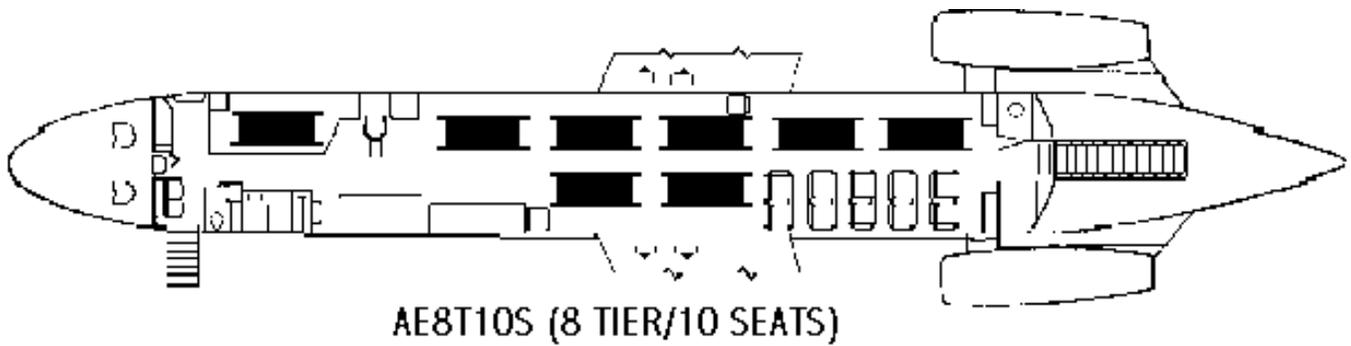


Figure 25.12. C-9 Configuration--AE9T4S.

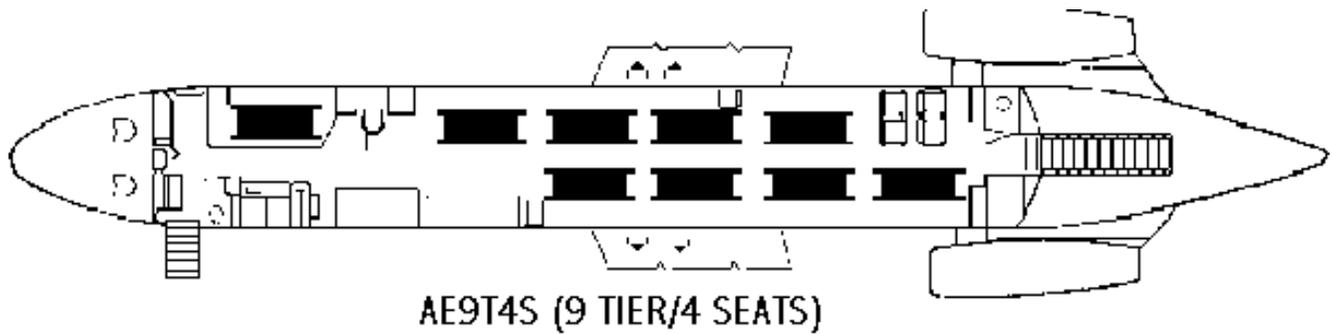
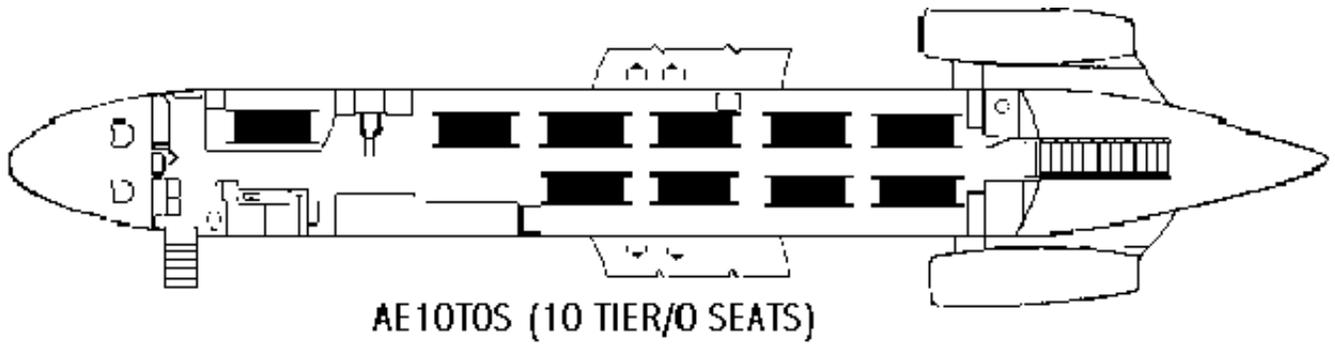


Figure 25.13. C-9 Configuration--AE10T0S.



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

AFPD 10-9, *Lead Operating Command Weapon Systems Management*  
AFPD 11-2, *Aircraft Rules and Procedures*  
AFPD 10-21, *Air Mobility Lead Command Roles and Responsibilities*  
AFI 10-403, *Deployment Planning*  
AFI 11-202V1, *Aircrew Training*  
AFI 11-202V2, *Aircrew Standardization/Evaluation Program*  
AFI 11-202V3, *General Flight Rules*  
AFI 11-215, *Flight Manuals Program (FMP)*  
AFI 11-209, *Air Force Participation in Aerial Events*  
AFI 11-218, *Aircraft Operations and Movement on the Ground*  
AFI 11-401, *Flight Management*  
AFI 11-2C-9V1, *C-9 Aircrew Training*  
AFI 11-2C-9V2, *C-9 Aircrew Evaluation Criteria*  
AFJI 11-204, *Operational Procedures for Aircraft Carrying Hazardous Materials*  
AFI 13-207, *Preventing and Resisting Piracy [Hijacking]*  
AFI 21-101, *Maintenance Management of Aircraft*  
AFI 23-202, *Buying Petroleum Products and Other Supplies and Services Off-Station*  
AFI 31-101V1, *Air Force Physical Security Program*  
AFI 31-401, *Information Security Program Management*  
AFI 32-2001, *The Fire Protection Operations and Fire Prevention Program*  
AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*  
AFMAN 10-206, *Operational Reporting*  
AFMAN 11-230, *Instrument Procedures*  
AFMAN 37-139, *Records Disposition Schedule*  
AFJI 48-104, *Quarantine Regulations of the Armed Forces*  
AFI 48-123, *Medical Examinations and Standards*  
AFI 91-202, *The US Air Force Mishap Prevention Program*  
AFI 91-204, *Safety Investigations and Reports*

AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections.*

AFMAN 23-110 V2 Part 3, *Supply/Fuels Wartime Planning*

DoD 4515.13R, *Air Transportation Eligibility*

AFOSH Standard 127-100, *Aircraft Flight Line - Ground Operations and Activities*

### ***Abbreviations and Acronyms***

**AC**—Aircraft Commander

**ACDE**—Aircrew Chemical Defense Ensemble

**ACF**—Acceptance Check Flight

**AECC**—Aeromedical Evacuation Control Center

**AGE**—Aerospace Ground Equipment

**AOR**—Area of Responsibility

**APU**—Auxiliary Power Unit

**ASRR**—Airfield Suitability and Restrictions Report

**ATC**—Air Traffic Control

**BRNAV**—Basic Area Navigation Airspace

**C2**—Command and Control

**CDT**—Crew Duty Time

**CG**—Center of Gravity

**CW**—Chemical Warfare

**CCA**—Contamination Control Area

**CECR**—Crew Enhancement Crew Rest

**CFP**—Computer Flight Plan

**COE**—Certification of Equivalency

**CSS**—Chief Servicing Supervisor

**CVR**—Cockpit Voice Recorder

**DCS**—Defense Courier Service

**DH**—Decision Height

**EAL**—Entry Access List

**ETA**—Estimated Time of Arrival

**ETE**—Estimated Time En route

**ETIC**—Estimated Time in Commission

**ETP**—Equal Time Point  
**FCB**—Flight Crew Bulletin  
**FAF**—Final Approach Fix  
**FCF**—Functional Check Flight  
**FCIF**—Flight Crew Information File  
**FDP**—Flight Duty Period  
**FIR**—Flight Information Region  
**FMC**—Fully Mission Capable  
**FMS**—Flight Management System  
**FOD**—Foreign Object Damage  
**FOL**—Forward Operating Location  
**FSO**—Flying Safety Officer  
**GPS**—Global Positioning System  
**HATR**—Hazardous Air Traffic Report  
**ICS**—Infant Car Seat  
**IFF**—Identification Friend or Foe  
**INS**—Inertial Navigation System  
**LRC**—Long Range Cruise  
**MAF**—Mobility Air Forces  
**MARSA**—Military Assumes Responsibility for Safe Altitude  
**MC**—Mission Capable  
**MCD**—Medical Crew Director  
**MDS**—Mission Design Series (e.g., C-9A)  
**ME**—Mission Essential  
**MEL**—Minimum Equipment List  
**MNPS**—Minimum Navigation Performance Specifications  
**MOB**—Main Operating Base  
**MPL**—Minimum Parts List  
**MSL**—Mean Sea Level  
**NDB**—Non Directional Beacon  
**NEW**—Net Explosives Weight  
**NM**—Nautical Mile

**NOTAM**—Notice to Airmen  
**OIS**—Obstacle Identification Surface  
**PDO**—Publication Distribution Office  
**PF**—Pilot Flying  
**PNF**—Pilot Not Flying  
**PMCR**—Post Mission Crew Rest  
**PPR**—Prior Permission Required  
**PMSV**—Pilot to Meteorologist Service  
**RAIM**—Receiver Autonomous Integrity Monitoring  
**RNP**—Required Navigation Performance  
**ROE**—Rules of Engagement  
**RRFL**—Required Ramp Fuel Load  
**RVSM**—Reduced Vertical Separation Minimum  
**SAAM**—Special Assignment Airlift Mission  
**SID**—Standard Instrument Departure  
**SIGMET**—Significant Meteorological Information  
**SM**—Statue Mile  
**STM**—Supplemental Training Mission  
**TOLD**—Take off and Landing Data

### *Terms*

**Aeromedical Evacuation (AE)**—Movement of patients under medical supervision between medical treatment facilities (MTFs) by air transportation.

**Aeromedical Evacuation Coordination Center (AECC)**—A coordination center, within the Joint Air Operations Center, which monitors all activities related to aeromedical evacuation (AE) operations execution. It manages the medical aspects of the AE mission and serves as the net control station for AE communications. It coordinates medical requirements with airlift capability, assigns medical missions to the appropriate AE elements, and monitors patient movement activities.

**Aeromedical Evacuation Crewmember (AECM)**—Qualified Flight Nurse (FN) or Aeromedical Evacuation Technician (AET) performing AE crew duties.

**Aeromedical Evacuation Operations Officer (AEOO)**—Medical Service Corps (MSC) officer or medical administrative specialist or technician (AFSC 4A0X1) assigned to the AE system to perform duties outlined in applicable Air Force policy directives, instructions, 41-series handbooks, and this AFI.

**Air Force Satellite Communication (AFSATCOM)**—Satellite communications system capable of 75 bits per second (BPS) record message traffic.

**Air Force Component Commander (AFCC)**—In a unified, sub-unified, or joint task force command,

the Air Force commander charged with the overall conduct of Air Force air operations.

**Airlift**—Aircraft is considered to be performing airlift when manifested passengers or cargo are carried.

**Air Mobility Control Center (AMCC)**—Provides global coordination of tanker and airlift for AMC and operationally reports to the AMC TACC. Functions as the AMC agency that manages and directs ground support activities and controls aircraft and aircrews operating AMC strategic missions through overseas locations.

**Air Mobility Element (AME)**—The air mobility element is an extension of the Air Mobility Command Tanker Airlift Control Center deployed to a theater when requested by the geographic combatant commander. It coordinates strategic airlift operations with the theater airlift management system and collocates with the air operations center whenever possible. Also called AME. See also air operations center; Tanker Airlift Control Center.

**Air Reserve Component (ARC)**—Refers to Air National Guard and AFRC forces, both Associate and Unit Equipped.

**Air Route Traffic Control Center (ARTCC)**—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 (ATC)**—A service provided by an appropriate authority to promote the safe, orderly and expeditious use of the air transportation system and to maximize airspace utility.

**Allowable Cabin Load (ACL)**—Maximum payload that can be carried on an individual sortie. It may be limited by the maximum takeoff gross weight, maximum landing gross weight, maximum zero fuel weight, or aircraft configuration. Maximum through load is limited to that which can be carried on the most restrictive leg of the mission.

**AMC History System (AHS)**—Database that compiles and stores tanker activity input by line units.

**Augmented Crew**—Basic aircrew supplemented by additional qualified crewmembers to permit in-flight rest periods.

**Aviation Into-Plane Reimbursement (AIR) Card**—A credit card that can be used to purchase aviation fuels, related fuel supplies and ground services at commercial airports where no DoD or Canadian Into-Plane contract exists.

**Bird Aircraft Strike Hazard (BASH)**—An Air Force program designed to reduce the risk of bird strikes.

**Bird Watch Condition Low**—Normal bird activity (as a guide, fewer than 5 large birds [waterfowl, raptors, gulls, etc.] or fewer than 15 small birds [terns, swallows, etc.]) on and above the airfield with a low probability of hazard. Keep in mind a single bird in a critical location may elevate the Bird Watch Condition (BWC) to moderate or severe.

**Bird Watch Condition Moderate**—Increased bird population (approximately 5 to 15 large birds or 15 to 30 small birds) in locations that represent an increased potential for strike. Keep in mind a single bird in a critical location may elevate the BWC to moderated or severe.

**Bird Watch Condition Severe**—High bird population (as a guide, more than 15 large birds or 30 small birds) in locations that represent an increased potential for strike. Keep in mind a single bird in a critical

location may cause a severe BWC.

**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.

**BLUE BARK**—US military personnel, US citizen civilian employees of the Department of Defense (DoD), and the dependents of both categories who travel in connection with the death of an immediate family member. It also applies to escorts for dependents of military members traveling under competent orders.

**Border Clearance**—Those clearances and inspections required to comply with federal, state, and local agricultural, customs, immigration, and immunization requirements.

**Category I Route**—Any route that does not meet the requirements of a category II route, including tactical navigation and over water routes.

**Category II Route**—Any route on which the position of the aircraft can be accurately determined by the overhead crossing of a radio aid (NDB, VOR, and TACAN) at least once each hour with positive course guidance between such radio aids.

**Chalk Number**—Number given to a complete load and to the transporting carrier.

**Charge Medical Technician (CMT)**—AET responsible for ensuring completion of enlisted aeromedical crew duties.

**COIN ASSIST**—Nickname used to designate dependent spouses accompanying dependent children and dependent parents of military personnel reported missing or captured who may travel space available on military aircraft for humanitarian purposes on approval of the Chief of Staff, United States Army; Chief of Staff, United States Air Force; Chief of Naval Operations; or the Commandant of the Marine Corps.

**Combat Control Team (CCT)**—Team of Air Force personnel organized, trained, and equipped to establish and operate navigational or terminal guidance aids, communications, and aircraft control facilities in support of tactical operations.

**Command and Control (C2)**—Exercise of direction and authority over assigned forces by a properly designated command echelon in the accomplishment of the mission.

**Command and Control Center (CCC) (C3)**—Each CCC provides supervision, guidance, and control within its assigned area of responsibility. For the purpose of this AFI, CCCs include operations centers, command posts, air mobility elements, tanker airlift control elements (TALCE), air mobility control centers, and tanker task forces.

**Command and Control Information Processing System (C2IPS)**—Computer-based information transmission and information handling for command and control functions associated with the Director of Mobility Forces (DIRMOBFOR), AME fixed units, and TALCE. Interfaces to and automatically updates the Global Decision Support System (GDSS).

**Communication System Operator (CSO)**—Flight crew member who is responsible for inspecting, operating, and maintaining all communications and electronic equipment aboard the aircraft. See [Chapter 14](#) of this AFI.

**CONFERENCE SKYHOOK**—Communication conference available to help aircrews solve in-flight problems that require additional expertise.

**Contingency Mission**—Mission operated in direct support of an OPORD, OPLAN, disaster, or

emergency.

**Critical Phase of Flight**—Takeoff, approach, and landing.

**Deadhead Time**—Duty time for crewmembers in passenger positioning or de-positioning for a mission or mission support function.

**Department of Defense Activity Address Code (DoDAAC)**—A six-position, alpha-numeric code assigned to identify the unit, activity, or organization within DoD that owns the aircraft.

**Designated Courier**—Officer or enlisted member in the grade of E-5 or above of the US Armed Forces, or a Department of State diplomatic courier, selected by the Defense Courier Service (DCS) to accept, safeguard, and deliver DCS material as directed. A primary crewmember should be used as a courier only as a last resort.

**Desolate Terrain Missions**—Any mission in excess of one hour over desert, tropical, or jungle terrain (not to include flights conducted over the CONUS).

**Deviation**—A deviation occurs when takeoff time is not within -20/+14 minutes (or MAJCOM defined) of scheduled takeoff time.

**Double Blocking**—Parking an aircraft in one spot for downloading, uploading, or refueling, then taxiing it to another spot for final block-in. The extra time required for double blocking will be taken into account during mission planning. To compensate for double blocking on departure, the aircrew legal for alert time may be adjusted to provide additional time from aircrew showtime to departure.

**Direct Instructor Supervision**—Supervision by an instructor of like specialty with immediate access to controls (for pilots, the instructor must occupy either the pilot or copilot seat).

**Director, Mobility Forces (DIRMOBFOR)**—Individual responsible for theater mobility force management. The Air Force component commander exercises operational control of assigned or attached mobility forces through the DIRMOBFOR. The DIRMOBFOR monitors and manages assigned mobility forces operating in theater. The DIRMOBFOR provides direction to the Air Mobility Division in the AOC to execute the air mobility mission and will normally be a senior officer familiar with the AOR.

**Distinguished Visitor (DV)**—Passengers, including those of friendly nations, of star or flag rank or equivalent status, to include diplomats, cabinet members, members of Congress, and other individuals designated by the DoD due to their mission or position (includes BLUE BARK and COIN ASSIST).

**Due Regard**—Operational situations that do not lend themselves to International Civil Aviation Organization (ICAO) flight procedures, such as military contingencies, classified missions, politically sensitive missions, or training activities. Flight under "Due Regard" obligates the military aircraft commander to be his or her own air traffic control (ATC) agency and to separate his or her aircraft from all other air traffic. (See FLIP General Planning, section 7.)

**Equal Time Point (ETP)**—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 in Commission (ETIC)**—Estimated time required to complete required maintenance.

**Execution**—Command-level approval for initiation of a mission or portion thereof after due consideration of all pertinent factors. Execution authority is restricted to designated command authority.

**Experienced Aircraft Commander**—Aircraft commander with a minimum of 100 flying hours in

command since upgrade. Individual must also be designated an "experienced aircraft commander" by the squadron commander or operations officer.

**Familiar Field**—An airport in the local flying area at which unit assigned aircraft routinely perform transition training. Each operations group commander will designate familiar fields within their local flying area.

**Firm Scheduled Return Time (FSRT)**—Scheduling tool used by air mobility units to predict when crews will return to home station. FSRT for active duty and AFRC is defined as SRT plus 24 hours.

**Flight Attendant (FA)**—Flight crewmember who provides cabin service, instruct passengers in the use of emergency equipment, direct and control passengers under emergency conditions, and maintain cabin cleanliness. See [Chapter 13](#) of this AFI for an amplified explanation.

**Global Decision Support System (GDSS)**—AMC's primary execution command and control system. GDSS is used to manage the execution of AMC airlift and tanker missions.

**Global Patient Movement Requirements Center (GPMRC)**—A joint activity reporting directly to the Commander in Chief, US Transportation Command, the Department of Defense single manager for the regulation of movement of uniformed services patients. The Global Patient Movement Requirements center authorizes transfers to medical treatment facilities of the Military Departments or the Department of Veterans Affairs and coordinates intertheater and inside continental United States patient movement requirements with the appropriate transportation component commands of US Transportation Command.

**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 (HAZMAT)**—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, etc.

**Instructor Supervision**—Supervision by an instructor of like specialty. For critical phases of flight, the instructor must occupy one of the seats or stations, with immediate access to the controls.

**In-Place Time (IPT)**—Time when an aircraft and crew are at an operating base and prepared to load for the mission.

**Interfly**—The exchange and/or substitution of aircrews and aircraft between Mobility Air Forces (MAF) including crewmembers and/or aircraft from USAFE, PACAF, and AMC-gained AFRC forces.

**L-Band SATCOM**—600 BPS satellite communications (SATCOM) system contracted through the International Maritime Satellite Organization (INMARSAT), used primarily for command and control. The system consists of a satellite transceiver, a laptop computer, and a printer.

**Loading Time**—Specific time established jointly by the commanders concerned when aircraft loading will begin.

**Local Training Mission**—A mission scheduled to originate and terminate at home station (or an off-station training mission), generated for training or evaluation, and executed at the local level.

**Maintenance Status—**

A-1: No maintenance required.

A-2 (Plus Noun); Minor maintenance required, but not serious enough to cause delay. Add nouns that identify the affected units or systems, i.e. hydraulic, ultra high frequency (UHF) radio, radar, engine, fuel control, generator, boom or drogue, etc. Attempt to describe the nature of the system malfunction to the extent that appropriate maintenance personnel will be available to meet the aircraft. When possible, identify system as mission essential (ME) or mission contributing (MC).

A-3 (Plus Noun): Major maintenance. Delay is anticipated. Affected units or systems are to be identified as in A-2 status above.

A-4: Aircraft or system has suspected or known biological, chemical, or radiological contamination.

**Medical Crew Director (MCD)**—Flight Nurse (FN) responsible for supervising patient care and AECMs assigned to AE missions.

**Mission**—Movement of aircraft from a designated point of origin to a designated destination as defined by assigned mission identifier, mission nickname, or both in the schedule, mission directive, OPORD, OPLAN, or FRAG order.

**Mission Advisory**—Message dispatched by command and control agencies, liaison officers, or aircraft commanders advising all interested agencies of any changes in status affecting the mission.

**Mobility Air Force (MAF)**—Forces assigned to mobility aircraft or MAJCOMs with operational or tactical control of mobility aircraft.

**Off Station Training Flight**—A training flight that originates or terminates at other than home station that is specifically generated to provide the aircrew experience in operating away from home station. Off station trainers will not be generated solely to transport passengers or cargo."

**Operational Control (OPCON)**—Functions of command and control involving composition of subordinate forces, authority to approve allocation of assets to specific missions, assignment of tasks, designation of objectives, and authoritative direction necessary to accomplish the mission. This is a higher authority than the command that performs specific mission functions.

**Operational Missions**—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 (ORI), AMC channel or SAAM, and JA/ATT missions may be designated "CLOSE WATCH" as necessary.

**Operational Risk Management (ORM)**—ORM is 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.

**Opportune Airlift**—Transportation of personnel, cargo, or both aboard aircraft with no expenditure of additional flying hours to support the airlift.

**Originating Station**—Base from which an aircraft starts on an assigned mission. May or may not be the home station of the aircraft.

**Over Water Flight**—Any flight that exceeds power off gliding distance from land.

**Patient Movement Categories**—

**Urgent** Patients who must be moved immediately to save life, limb, or eyesight, or to prevent complication of a serious illness.

**Priority** Patients requiring prompt medical care that must be moved within 24-hours.

**Routine** Patients who should be picked up within 72-hours and moved on routine/scheduled flights.

**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. Aircraft commanders 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 aircraft commander for not complying with permit to proceed procedures.)

**Point Of No Return**—Most distant point along the planned route from which an aircraft may safely return to its point of departure or alternate airport with approach and landing fuel.

**Point of Safe Return**—Most distant point along the planned route from which an aircraft may safely return to its point of departure or alternate airport with required fuel reserve.

**Positioning and De-positioning Missions**—Positioning missions are performed to relocate aircraft for the purpose of conducting a mission. De-positioning missions are made to return aircraft from bases at which missions have terminated.

**Quick Stop**—Set of procedures designed to expedite the movement of selected missions by reducing ground times at en route or turnaround stations.

**Ramp Coordinator**—Designated representative of the CCC whose primary duty is the coordination of ground handling activities on the ramp during large scale operations.

**Scheduled Return Date (SRD)**—Scheduling tool used by air mobility units to predict when crews will return to home station. It allows force managers to plan aircrew availability and provide crews visibility over monthly flying activities. AMC and AMC-gained aircrews (except those on standby at home station) will have an SRD established on their flight orders.

**Scheduled Return Time (SRT)**—Scheduling tool used by air mobility units to predict when crews will return to home station. It allows force managers to plan aircrew availability and provide crews visibility over monthly flying activities. AMC and AMC-gained aircrews (except those on standby at home station) will have a SRT established on their flight orders.

**Significant Meteorological Information (SIGMET)**—Area weather advisory issued by an ICAO meteorological office relayed to and broadcast by the applicable ATC agency. SIGMET advisories are issued for tornadoes, lines of thunderstorms, embedded thunderstorms, large hail, severe and extreme turbulence, severe icing, and widespread dust or sand storms. SIGMETS frequently cover a large geographical area and vertical thickness. They are prepared for general aviation and may not consider aircraft type or capability.

**Special Assignment Airlift Mission (SAAM)**—Funded airlift that cannot be supported by channel missions because of the unusual nature, sensitivity, or urgency of the cargo or that requires operations to points other than the established channel structure.

**Stations Time**—Normally 30-minutes prior to takeoff. Aircrews will have completed their pre-flight duties and be at their crew positions. Passengers will be on board.

**Tactical Event**—Formation and Threat Avoidance Approaches/Departures (TAA/D).

**Tanker Airlift Control Center (TACC)**—The Air Mobility Command direct reporting unit responsible for tasking and controlling operational missions for all activities involving forces supporting US Transportation Command's global air mobility mission. The Tanker Airlift Control Center is comprised of the following functions: current operations, command and control, logistics operations, aerial port operations, aeromedical evacuation, flight planning, diplomatic clearances, weather, and intelligence. Also called TACC. See also Tanker Airlift Control Element.

**Tanker Airlift Control Element (TALCE)**—Team of qualified Air Force personnel established to control, coordinate, and function as an Air Force tanker and airlift C2 facility at a base where normal AMC C2 facilities are not established or require augmentation. TALCEs support and control contingency operations on both a planned and no-notice basis.

**Theater Patient Movement Requirements Center (TPMRC)**—The TPMRC is responsible for theater wide patient movement (e.g., medical regulating and AE scheduling), and coordinates with theater MTFs to allocate the proper treatment assets required to support its role. The primary role of the TPMRC is to devise theater plans and schedules and then monitor their execution in concert with the GPMRC. The TPMRC is responsible to the Combatant Commander through the Combatant Command Surgeon. The TPMRC is also responsible for all aspect of intratheater patient movement management. A TPMRC provides command and control for patient movement management operations in its theater of operations, as directed by its Combatant Commander's operational policy, and in coordination with USTRANSCOM, acting as a supporting combatant command, responsible for intertheater and CONUS patient movement.

**Time Out**—Common assertive statement used to voice crewmember concern when safety may be jeopardized.

**Training Mission**—Mission executed at the unit level for the sole purpose of aircrew training for upgrade or proficiency. Does not include operational missions as defined in this AFI.

**Unilateral**—Operations confined to a single service.

**Unit Move**—A mission airlifting military passengers or troops who originate from the same unit and onload point, are under the control of a designated troop commander, and offload at the same destination.

**Zero Fuel Weight**—Weight, expressed in pounds, of a loaded aircraft not including wing and body tank fuel. All weight in excess of the maximum zero fuel weight will consist of usable fuel.

**Attachment 1 (SCOTT)****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

DOD 4515.13-R, *Air Transportation Eligibility*

AFI 11-2C-9V3 CL-3, *Patient/Passenger Briefings Guide*

AFI 11-301, *Aircrew Life Support Program*

AFI 11-401/AMC1, *Aviation Management*

AFI 41-309, *Aeromedical Evacuation Equipment Standards*

AMCI 10-202V6, *Mission Reliability Reporting System (MRRS)*

SAFBI 13-201, *Airfield Management and Air Traffic Control*

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

TO 14P3-1-112, *Maint Instr – Nomex Flt Gr Coveralls, Types CWU-27/P and CWU-28/P and Gloves, Type GS/FRP-2, Jacket, Flyers Summer Type CWU-36/P, Jacket, Flyers Winter Type CWU-45/P, Hood, Winter, Flyers (CWU-17/P Jacket), Trousers, Flyers, Extreme Cold Weather, CWU-18/P*

TO 1C-9A-1, *Flight Manual (Douglas Aircraft)*

TO 1C-9A-1-1, *Flight Manual—Performance Data*

TO 1C-9A-1-CL-4, *AET's Abbreviated Checklist, Flying Crew Chiefs*

AS 016, *Special Purpose Clothing and Personal Equipment*

*Douglas Service Special Supplement-DC-9 Series 20/30/40 Fuel Conservation*

***Abbreviations and Acronyms***

**ACM**—Additional Crew Member

**AE**—Aeromedical Evacuation

**AECM**—Aeromedical Evacuation Crew Member

**AFRC**—Air Force Reserve Command

**ASTS**—Aeromedical Staging Squadron

**CONUS**—Continental United States

**CP**—Command Post

**EEL**—Emergency Equipment Litter

**EPOS**—Emergency Passenger Oxygen System

**FCC**—Flying Crew Chief

**FCF**—Functional Check Flight

**FCG**—Foreign Clearance Guide

**FL**—Flight Level

**FLIP**—Flight Information Publication

**FSSZ**—Fuel Servicing Safety Zone

**GPMRC**—Global Patient Movement Requirements Center

**IFR**—In-Flight Refueling

**IME**—In-Flight Medical Equipment

**IP**—Instructor Pilot

**KIAS**—Knots Indicated Air Speed

**KT**—Knot

**LPS**—Life Preserver Set

**MEGP**—Mission-Essential Ground Personnel

**OG**—Operations Group

**OCONUS**—Outside the Continental United States

**OWL**—Over-Weight Litter

**RON**—Remaining Overnight

**TACC**—Tanker Airlift Control Center

**Attachment 2****HOSTILE FIRE ENTRY AND EXIT CHECKLISTS (CL-1)**

**A2.1. Functional Statement.** Use the Hostile Fire Entry and Exit checklists during flights into low threat environments according to **Chapter 17**. Copy this checklist and into the pilots and AECM checklist according to AFI 11-215 and MAJCOM supplement.

Figure A2.1. Hostile Fire Entry/Exit Checklist.

**BY ORDER OF THE** **AFI 11-2C-9V3 CL-1**  
**SECRETARY OF THE AIR FORCE** **1 JUNE 2000**



***Flying Operations***

**HOSTILE FIRE ENTRY AND EXIT CHECKLISTS**

This checklist establishes procedures for the operation of C-9A aircraft employed by Mobility Air Forces (MAF) to accomplish their worldwide missions.

This checklist is printed on standard 8 ½" x 11" bond paper then trimmed to a unique size 4 ½" x 6 ½" that will fit the standard plastic C-9A aircrew checklist binders. Units may request copies of this checklist printed on a water proof-based media (in the size outlined) from the OPR. This product reduces weight and eliminates the need for plastic inserts. Limit water proof copies to aircrew only for use in-flight and training purposes.

HOSTILE FIRE ENTRY CHECKLIST—COCKPIT CREW.....	2
HOSTILE FIRE ENTRY CHECKLIST—CABIN CREW.....	4
HOSTILE FIRE EXIT CHECKLIST—COCKPIT CREW.....	5
HOSTILE FIRE EXIT CHECKLIST—CABIN CREW.....	6

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**HOSTILE FIRE ENTRY CHECKLIST****FLIGHT CREW**

*Complete this checklist not later than 30-minutes before entering a designated threat environment.*

**1. Crew - "NOTIFIED" (P)**

Direct MCD [1st FA] to initiate Hostile Fire Entry Checklist

**2. Crew Briefing - "AS REQUIRED" (P)**

Review intentions, threat locations, aircraft configuration, and approach requirements. Brief MCD [1st FA] on location of observers and likely threat signatures.

**3. Survival Equipment - "DON" (P, CP)**

If protective equipment is not to be worn, ensure it remains immediately available.

**4. Ignition - "GND START & CONT" (P)****5. Internal and External Lights - "AS REQUIRED" (P)**

Turn all non-essential exterior lights OFF. Set interior lighting to the minimum required (night only).

**6. IFF - "SET" (P)**

Ensure correct codes are set and proper modes are ON.

**7. Nav and Comm Radios - "AS REQUIRED" (P)**

Brief essential radios. Reduce emissions, turn OFF non-essential radios/equipment.

**8. Radar - "AS REQUIRED" (P)**

If threat dictates or if not required for flight, turn radar OFF to reduce emissions.

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**9. APU - "START" (CP)**

Turn both APU bus switches OFF. Start APU and verify voltage and frequency within limits. Toggle both APU bus switches "ON."

**10. Loose Items - "SECURED" (P, CP)**

Ensure cockpit is secure.

**11. Observers - "CLEARED TO POSITION" (P)**

Direct MCD [1st FA] to position observers, as briefed. All crew not performing crew duties will scan outside aircraft for threats, as directed by Aircraft Commander.

**12. Comm Systems - "CHECKED" (P, CP, MCD, CMT, [1st FA, 2nd FA])**

Pilot and Copilot will select PA on comm panel. MCD and CMT [1st FA, 2nd FA] will test PA system by announcing, "MCD/CMT [1st IOSS, 2nd FA] CABIN READY." Pilot will acknowledge these checks via PA.

**NOTE**

Observer reports will be announced by the Public Address system.

**13. Hostile Fire Entry Checklist - "COMPLETE" (P)**

MCD will inform the Aircraft Commander the checklist is complete and cabin is secure via PA [1st FA reports cabin secure to AC before assuming assigned seat].

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## **HOSTILE FIRE ENTRY CHECKLIST**

### **CABIN CREW**

*Complete this checklist when directed by the Aircraft Commander.*

1. **Aeromedical Crew - BRIEFED (MCD)**
2. **Survival Equipment – DON, AS REQUIRED (ALL)**  
If wear of protective equipment is not indicated, it shall be SECURED and remain immediately available at all times.
3. **Internal Aircraft Lights – SET, AS REQUIRED (MCD [1st FA])**  
For night operations, set interior lighting to minimum required and draw all window shades except at observer rows.
4. **Observers - BRIEFED (FN [1st FA])**  
Observers will scan outside aircraft for threats, as briefed by AC.
5. **Observers - IN POSITION (FN, 2AET, 3AET [2nd FA, 3rd FA, CSO])**
6. **Cabin - SECURED (MCD [1st FA])**  
Verify with CMT [2nd FA] that securing straps and safety belts are fastened and equipment secure.

### **WARNING**

MCD [1st FA] will immediately advise aircraft commander if cabin is not secure for maneuvering.

7. **Communications System - CHECKED (MCD, CMT [1st FA, 2nd FA])**  
Test Public Address (PA) system announcing "MCD/CMT [1st FA/ 2nd FA] cabin ready." AC, acknowledge checks via PA.
8. **Hostile Fire Entry Checklist – COMPLETE (ALL)**  
MCD will inform the Aircraft Commander the checklist is complete and cabin secure via PA [1st FA reports cabin secure to AC before assuming assigned seat].

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**HOSTILE FIRE EXIT CHECKLIST****COCKPIT CREW**

*This checklist returns the aircraft to normal cruise configuration upon departing the threat environment.*

**1. Crew - "NOTIFIED" (P)**

Direct MCD to initiate Hostile Fire Exit checklist

**2. Observers - "CLEARED TO REPOSITION" (P)****3. Battle Damage Assessment - "COMPLETE" (P)**

Cabin crew will make a sweep of the aircraft looking for damage. MCD will inform the Aircraft Commander of any damage noted.

**4. Survival Equipment - "AS REQUIRED" (P, CP)****5. IFF - "SET" (P)****6. Nav and Comm Radios - "SET" (P)****7. Radar - "AS REQUIRED" (P)****8. Internal and External Lights - "SET" (P)****9. Ignition - "AS REQUIRED" (P)****10. APU - "AS REQUIRED" (P)****11. Hostile Fire Exit Checklist - "COMPLETE" (P)**

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**HOSTILE FIRE EXIT CHECKLIST****CABIN CREW**

*This checklist returns the aircraft to normal cruise operation upon departing the threat environment. Complete upon direction of the AC.*

- 1. Aeromedical Crew - BRIEFED (MCD)**
- 2. Observers – RE-POSITION (FN, 2AET, 3AET, AECMs, AS REQUIRED)**
- 3. Battle Damage Assessment - COMPLETE (ALL)**  
All available crew will sweep the aircraft for damage.
- 4. Battle Damage – REPORT, AS REQUIRED (MCD)**  
MCD will inform the Aircraft Commander of any damage.
- 5. Survival Equipment - DOFF AND SECURE, AS REQUIRED (ALL)**  
Protective equipment will be secured.
- 6. Internal Aircraft Lights – SET, AS REQUIRED (MCD)**  
Normal lighting may be used. Shades may be raised.
- 7. Hostile Fire Exit Checklist - COMPLETE (ALL)**  
MCD inform aC the checklist is complete by PA.

**Attachment 3****PREFLIGHT AND POST MISSION AEC CHECKLIST (CL-2)**

**A3.1. Functional Statement.** Use the Preflight & Post Mission AEC Checklist, during flights Copy this checklist into AECM checklist according to AFI 11-215 and MAJCOM supplement.

Figure A3.1. Preflight & Post Mission AEC Checklist.

*BY ORDER OF THE SECRETARY OF THE AIR FORCE* *AFI 11-2C-9V3 CL-2  
1 JUNE 2000*



*Flying Operations*

**PREFLIGHT AND POST MISSION AEC  
CHECKLIST**

This checklist provides quick and reliable reference while performing mission preparation and post mission duties. All C-9 AE crews will carry this checklist.

This checklist is printed on standard 8 ½" x 11" bond paper then trimmed to a unique size 4 ½ " x 6 ½" that will fit the standard plastic C-9A aircrew checklist binders. Units may request copies of this checklist printed on a water proof-based media (in the size outlined) from the OPR. This product reduces weight and eliminates the need for plastic inserts. Limit water proof copies to aircrew only (for use in-flight and training purposes).

ABBREVIATIONS.....2  
 CREW DUTIES..... 2  
 PREFLIGHT.....2  
 POST MISSION.....3

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**ABBREVIATIONS**

AECM	Aeromedical Evacuation Crew Member
AEC	Aeromedical Evacuation Crew (entire AE crew)
MCD	Medical Crew Director
FN	Flight Nurse
CMT	Charge Medical Technician
2AET	Second Aeromedical Evacuation Technician
3AET	Third Aeromedical Evacuation Technician
AET	Aeromedical Evacuation Technician (CMT, 2AET&3AET)

**Crew Duties – MCD, FN, CMT, and AET****PREFLIGHT****1. Administrative Duties – Completed (AEC)**

- a. Read and annotate FCIF.
- b. Obtain mission paperwork.

**2. Pilot Briefing – Attended/Completed (AEC)****3. AEC Briefing – Attended/Completed (AEC)**

- a. Review patient manifest, special patient requirements, and crew responsibilities.
- b. Receive patient report.
  - (1) Identify patient or equipment requirements that may require extended ground time/use of aircraft systems.
  - (2) Identify 1A, 1B, prisoners, security police, and armed attendants, as required.
  - (3) Review infection control procedures.
- c. Discuss patient positioning plan.
- d. Discuss medical emergency procedures.
  - (1) Identify ACLS/PALS trained AEC.
  - (2) Make cardiac arrest assignments

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(3) Discuss patient placement.

- e. Review/discuss aircraft emergencies and egress plan(s). (MCD)
- f. Coordinate specific equipment, supplies, in-flight meals, and fluids, as required. (MCD, FN)
- g. Coordinate enplaning/deplaning procedures.
- h. Discuss cabin coverage and safety procedures.
- i. Discuss crew resource management (CRM) responsibilities.
- j. If medical ACM is present, brief duties/responsibilities (collect copy of orders).

**4. Mission Preparation - Completed (AEC)**

- a. Obtain medication kits. (FN)
- b. Obtain medical supplies.
- c. Perform equipment preflight (may complete on aircraft).
- d. Load supplies/equipment & transport (as required).

**POST MISSION.****1. Post Flight Debriefings – Attended (AEC)**

- a. Attend applicable debrief(s) (pilot's, intelligence, crew, etc.)
- b. Discuss mission discrepancies, positive outcome, etc.
- c. Properly store all medical equipment/supply kits.

**2. Command Post, Sqn, etc. Coordination – Completed (AEC)**

- a. Turn in mission paperwork/inventories.
- b. Arrange for flight home, as required. (MCD, CMT)
- c. Coordinate billet requirements with pilot, as required. (MCD)
- d. Notify GPMRC/TPMRC or tasking AE command element of crew's status, billeting, and ACM plans, as required. (MCD)

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**Attachment 4**

**AECM PATIENT/PASSENGER BRIEFING GUIDE CHECKLIST (CL-3)**

**A4.1. Functional Statement.** Use the Patient/Passenger Briefing guides at [Figure A4.1](#) during flights. Copy this checklist into the AECM checklist according to AFI 11-215 and MAJCOM supplement.

Figure A4.1. Patient/Passenger Briefings.

*BY ORDER OF THE SECRETARY OF THE AIR FORCE* *AFI 11-2C-9V3 CL-3  
1 JUNE 2000*



*Flying Operations*

**PATIENT/PASSENGER BRIEFINGS GUIDE**

This checklist guide provides quick reference while performing in-flight duties and mission training. All C-9 AE crews will carry this checklist guide.

This checklist is printed on standard 8 ½” x 11” bond paper then trimmed to a unique size 4 ½ “ x 6 ½” that will fit the standard plastic C-9A aircrew checklist binders. Units may request copies of this checklist printed on a water proof-based media (in the size outlined) from the OPR. This product reduces weight and eliminates the need for plastic inserts. Limit water proof copies to aircrew only (for use in-flight and training purposes).

DEPARTURE BRIEFING .....	2
EN ROUTE BRIEFING .....	3
OVERWATER BRIEFING .....	4
MEAL BRIEFING .....	4
DESCENT BRIEFING .....	5
FINAL APPROACH BRIEFING .....	5
REFUELING BRIEFING .....	5
TAXI BRIEFING.....	6
EMERGENCY BRIEFINGS .....	7

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**DEPARTURE BRIEFING**

Good (morning/afternoon/evening), ladies and gentlemen.

I'm \_\_\_\_\_, your medical crew director. On behalf of the aircraft commander, \_\_\_\_\_ and our crew, welcome aboard aeromedical evacuation flight \_\_\_\_\_. Our destination is \_\_\_\_\_ with \_\_\_\_\_ en route stops. Our flying time to \_\_\_\_\_ is approximately \_\_\_\_\_ hour(s) and \_\_\_\_\_ minutes.

Because your safety is of primary concern, we are going to point out the location of the emergency exits. Please review the instruction card located in the seat pocket in front of you and follow along as members of the crew point them out.

There are seven emergency exits in the cabin. There are two doors in the front of the aircraft, four overwing exits, and one door in the rear of the aircraft. Please locate the emergency exit nearest you; keeping in mind the closest exit may be behind you. Floor track lighting will illuminate to guide you to the exit.

Cabin pressure is controlled for your comfort. Should there be a change in pressurization, the compartment in the console above your head will open, presenting an oxygen mask. Reach up and remove the mask from the compartment door. Pull it firmly toward you, so that the plastic bag and tube are fully uncoiled. Place the mask over your nose and mouth and breathe normally. Secure the mask in place with the attached elastic headband. Once your mask is on, assist the person next to you. Parents, it is important for you to put on your mask first then assist your child. Litter patients will find a mask in the compartment on the console at the head of your litter.

A call button is located in the overhead console. If you have any questions or need assistance, please don't hesitate to call us.

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**DEPARTURE BRIEFING (continued).**

In preparation for takeoff, please ensure that your seat belt is fastened securely, the seat back is in the full upright position, tray table is stowed, and the armrests are down. Place all hand carried items beneath your own seat. Pocket size calculators, tape recorders and radios may be used when the "FASTEN SEAT BELT" sign is turned off. The use of cellular telephones and transmitters that remotely control devices is prohibited.

Smoking is prohibited on all aeromedical evacuation flights. Please observe the "NO SMOKING" sign at all times. For your safety, smoke alarms are located in the lavatories. Federal law prohibits tampering with, disabling, or destroying any smoke detector in an aircraft lavatory. Also, while seated, please keep your seat belt fastened. For your safety, please remain seated until the "FASTEN SEAT BELT" sign has been turned off.

**EN ROUTE BRIEFING (MCD)**

**NOTE:** This briefing may be used when enplaning small numbers of patients, attendants, and passengers. Give an individualized emergency briefing to each person enplaned at the en route stop.

Welcome aboard, ladies and gentlemen. In preparation for takeoff, please ensure that your seat belt is fastened securely, seat back is in the full upright position, tray table is stowed and the armrests are down. Place all hand carried items beneath your own seat. Pocket size calculators, tape recorders and radios may be used when the "FASTEN SEAT BELT" sign has been turned off. The use of cellular telephones and transmitters that remotely control devices are prohibited.

Smoking is prohibited on all aeromedical evacuation flights. Please observe the "NO SMOKING" sign at all times. Also, while seated, please keep your seat belt fastened. For your safety, please remain seated until the "FASTEN SEAT BELT" sign has been turned off.

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**OVERWATER BRIEFING (MCD)**

*NOTE: Brief the following for overwater flights:*

Since our flight will take us over water, we will demonstrate the donning of the life preserver. These preservers are located under each seat. Please observe. (Demonstrate donning)

**ADULT/CHILD LIFE PRESERVER:** Place the life preserver over your head with the straps behind you. Pull down, fully extending the straps behind your back. Attach the snap hooks on the straps to the front ring. Pull the straps to ensure a snug fit around the waist. To inflate, pull down sharply on the red tabs. If the life preserver fails to fully inflate, use the oral inflation tubes on both sides of the life preserver.

**DO NOT INFLATE THE LIFE PRESERVER INSIDE THE AIRCRAFT.** The crew will assist litter patients, infants, and children with their life preservers. Seat bottom cushions may be used as a flotation device. Pull up cushion, put arms through straps and hold cushion close to chest. Use the exits designated by a crewmember. Crewmembers will assist you in getting out of the aircraft and into the life rafts.

**MEAL BRIEFING (CMT)**

Ladies and Gentlemen, in approximately \_\_\_\_\_ minutes we will begin serving the (MORNING/AFTERNOON/EVENING) meal for our patients and attendants. Once we have begun serving, please remain seated until all meals have been served.

If you would like a meal, please bring your seat back to the upright position with armrests in place and place your tray table in front of you.

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**DESCENT BRIEFING (CMT)**

Ladies and Gentlemen, we have begun our initial descent for landing at \_\_\_\_\_. If you need assistance clearing your ears on descent, please let a crewmember know.

**FINAL APPROACH BRIEFING (CMT)**

Ladies and Gentlemen, the "FASTEN SEAT BELT" sign has been turned on in preparation for landing. Please ensure that your seat belt is fastened securely, the seat back is in the upright position, tray table is stowed, and armrests are in place. Electronic devices must be turned off at this time. Please ensure hand carried items are secured beneath your own seat.

**REFUELING BRIEFING (MCD) (As Necessary)**

Ladies and Gentlemen, we are about to begin refueling. In preparation for refueling, please ensure that your seat belt is unfastened, tray table is stowed, and shoes are on. Please keep aisles and emergency exits clear. The use of cellular telephones, laptop computers, CD players, and radios is prohibited. You are reminded that smoking is not permitted on or in the vicinity of the aircraft.

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**TAXI BRIEFING (CMT)**

Ladies and Gentlemen, we will be taxiing for a few more minutes. Please remain seated with your seat belt fastened until the aircraft has come to a complete stop and the "FASTEN SEAT BELT" sign has been turned off.

**EN ROUTE STATIONS:** Ground support personnel will be coming on board to expedite your departure. You may stand at your immediate seating area and gather your hand carried items while awaiting further deplaning instructions. Please keep the center aisle clear at all times and use caution when standing to avoid hitting your head on the overhead console. You will be escorted off the aircraft as soon as possible by either a medical or passenger services representative. Our approximate ground time will be \_\_\_\_\_ minutes for the purpose of enplaning and deplaning patients and passengers and servicing the aircraft.

**RON STATIONS:** Patients remaining overnight will stay in the medical holding facility to await transportation to destination hospitals. Ground support personnel will be coming onboard to expedite your departure. You may stand at your immediate seating area and gather your hand carried items while awaiting further deplaning instructions. Please use caution when standing to avoid hitting your head on the overhead console. Please keep the center aisle clear at all times. You will be escorted off the aircraft as soon as possible by a medical representative.

A passenger services representative will accompany passengers to the terminal where information is available on temporary quarters, dining facilities, and transportation. Please check your immediate area for all hand carried baggage and personal items.

You are reminded that smoking is not permitted on or in the vicinity of the aircraft at any time. On behalf of the crew, we have enjoyed serving you and hope you had a pleasant flight.

**AFI 11-2C-9V3 CL-3 1 JUNE 2000**

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**EMERGENCY BRIEFINGS (MCD)**

**CRASH LANDING**

Ladies and Gentlemen, the aircraft commander has informed me that we have a malfunction with the aircraft and Air Force directives require that we review emergency procedures with you.

Remove sharp objects, eyeglasses, dentures, high heels, ties, and loosen collars and tight fitting clothing. A crewmember will assist you in padding and securing eyeglasses and dentures on your person, and we will collect all other items.

Patients and passengers, ensure your seat belt is fastened securely, seat back is in the full upright position, tray table is stowed, and the armrests are in place.

If the pilot announces "BRACE FOR IMPACT", or six rings are sounded, patients and passengers in seats place your feet flat on the floor, put your arms on the armrests, and press your head and back against the seat back. Litter patients lie flat and grasp the sides of the litter tightly. Keep these positions until the aircraft comes to a complete stop.

The crew will direct you to exits and will assist those unable to walk. If you remain calm and follow instructions, there will be time for all to exit the aircraft.

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**DITCHING**

Ladies and Gentlemen, the aircraft commander has informed me that we have a malfunction with the aircraft. Air Force directives require that we review emergency procedures with you.

Remove sharp objects, eyeglasses, dentures, high heels, ties, and loosen collars and tight fitting clothing. A crewmember will assist you in padding and securing eyeglasses and dentures on your person, and we will collect all other items.

Patients and passengers put on your life preserver but **DO NOT INFLATE IT**. Ensure your seat belt is fastened securely, seat back is in the full upright position, tray table is stowed, and the armrests are in place.

The crew will assist litter patients, children, and infants with their life preserver.

If the pilot announces "BRACE FOR IMPACT", or six rings are sounded, patients and passengers in seats place your feet flat on the floor, put your arms on the armrests, and press your head and back against the seat back. Litter patients lie flat and grasp the sides of the litter tightly. Keep these positions until the aircraft comes to a complete stop.

The crew will direct you to exits and the life raft you are to use. We will assist those unable to walk. If you remain calm and follow instructions, there will be time for all to exit the aircraft.

## Attachment 5 (Added-SCOTT)

### 375 AW GUIDE TO OCONUS OPERATIONS

**A5.1. (Added-SCOTT)** This guide should aid aircrews in preparation for operating outside the CONUS. It is not meant to replace currently published documents such as Flight Information Publications (FLIP), Foreign Clearance Guides, Air Force Instructions or Air Mobility Command Instructions.

**A5.2. (Added-SCOTT)** Information on hazards, restrictions, and limitations not found in other publications is solicited from all operators. All units/personnel are tasked to submit pertinent data to update this summary whenever a condition is identified that will adversely affect our operation. After each scheduled mission outside the CONUS (except Canada), submit an after-action report with a brief description of minor problems and items of interest (*would like this to be brief by exception if possible / jrv*) to HQ AMC/TACC/XOO, DOA and DOV. For 375 AW- or 932 AW-generated missions, submit a report to 375/932 AW/OGV only.

**A5.3. (Added-SCOTT)** General Information. It is important that you research all the airfields you will transit, to include possible alternates. Since DoD approach plates only provide limited coverage of Central and South America, the Caribbean and some European international airfields, you may need to obtain approved Jeppesen Approach Plates. The DoD coverage may include some approaches to the airfields you will transit, but not to all available runways. In some cases, DoD has a published non-precision approach to an airfield when Jeppesen has an instrument landing system. Jeppesens are maintained at HQ AMC/DOT for emergency use only. Crews must arrange for their own Jeppesens through local purchase. In any case, only HQ “approved” non-DoD products may be used for navigation.

A5.3.1. (Added-SCOTT) Certification/Restricted Airfields. Headquarters AMC Airfield Suitability and Restrictions Report (ASRR) has designated certain fields as certification, restricted or daylight only, due to unique hazards or operating procedures. Crews may also call the AMC CP or TACC for the latest changes and updates that are available from GDSS. The 375 OG certification airfields are listed in this supplement (see AFI 11-2C-9V3, paragraph 10.5.17.2.).

A5.3.2. (Added-SCOTT) Many additional sources are available on information about non-CONUS airfields. Units should maintain continuity books with information such as parking location, hotels, transportation, etc., to help future crews. The information should be updated as part of the after-action reports provided by each crew. The 375 AW, 932 AW, and 375 OG/OGV will file these reports and can provide a summary of this information on request. Reports are also posted on the 375 OG/OGV website at: <https://www.scott.af.mil/375aw/375og/375ogv/ogvhome.htm>.

A5.3.3. (Added-SCOTT) Command and Control. Aircrews will pass command and control information, as directed, to HQ AMC/TACC. The USAF Global HF/SSB Stations listed in FLIP include a chart depicting areas of coverage and suggested frequency band selection based upon time of day. Keep in mind that atmospheric and other factors affect reception, making it necessary to attempt contact on all available frequencies. On the ground, you can call your controlling agency from embassies, consulates, or have them send a message to HQ AMC/TACC for you.

A5.3.4. (Added-SCOTT) Many ATC agencies, particularly those operating a nonradar facility, do not have the capability to quickly translate coordinates in a position report. With the exception of oceanic position reports, when asked for your position, it is usually easier to give your position as a radial and

DME from a navigation aid or point on an airway, rather than LAT/LONG from your FMS/GPS/INS. Coordinates are appropriate when passing a PIREP to weather personnel who may not be familiar with navaids by name.

A5.3.5. (Added-SCOTT) Be prepared for communication difficulties. Language barriers, accents, and unfamiliar names make radio communication a challenge. Listed below are some techniques for minimizing problems:

A5.3.5.1. (Added-SCOTT) Monitor the radios closely. If you do not hear the controller for a lengthy period, try a radio check.

A5.3.5.2. (Added-SCOTT) Monitor your position on the en route charts. As you approach FIR/UIR and sector boundaries, expect a frequency change. If this step does not happen, query the controller. En route charts usually have the sector controller's frequencies annotated on them.

A5.3.5.3. (Added-SCOTT) If you are unable to raise the controller, try disabling the squelch function on your radio. You can also attempt a relay with another aircraft on frequency. Many regions have listed a VHF frequency that is monitored by other aircraft operating within that area and can offer assistance with relaying information and position reports.

A5.3.5.4. (Added-SCOTT) Tune and monitor VHF/UHF guard. Many foreign civil ATC facilities do not use VHF guard. If you are in a bind, UHF guard may at least help you contact with a military facility that can relay information or get a usable VHF frequency for you.

A5.3.5.5. (Added-SCOTT) Be prepared when calling a new agency. Have a position report prepared, especially if you are operating in a nonradar environment. Being familiar with your filed routing and navaids along your route will make it easier to copy clearances and reroutes.

A5.3.6. (Added-SCOTT) Aircrews will carry terrain charts for intended destinations.

**A5.4. (Added-SCOTT) Flight Planning.** While this guide cannot provide an all-inclusive checklist for flight planning, it will attempt to highlight several publications, some of the shortcomings, and special-emphasis items to address during the planning phase of your mission.

A5.4.1. (Added-SCOTT) Mission Tasking. If diplomatic clearance is required for the routing, destination, or alternate, the clearance number and routing specified in the diplomatic clearance request should be available to the crew. Some airports cannot be used as alternates and this information may be published in the IFR Supplement, Area Planning or Foreign Clearance Guide. The diplomatically cleared routing may not be the preferred or standard routing. This routing could be because of political reasons or simply because the person sending the clearance request was not aware of preferred routings. If time permits and a routing is specified in your diplomatic clearance, try to ensure that the computer flight plan request includes your cleared routing. In any event, file and fly the routing specified in the diplomatic clearance. The diplomatic clearance may also specify the use of a special call sign. If so, this call sign will be used and filed on the flight plan for that particular leg.

A5.4.2. (Added-SCOTT) Foreign Clearance Guide (FCG). Check both the unclassified and classified editions for your destination and for countries you will overfly along your route. Ensure that you are entering the destination country at an Aerodrome of Entry at a time when Customs personnel are available and that you will have the required paperwork for customs and immigration. Check the valid time for diplomatic clearances if needed. Some times are valid from 0001L on the date requested, and early or late arrival is no problem. Other times are valid for meeting the requested time at the FIR

boundary, no earlier. The expiration times vary and may be by date, requested time + 24 hours or longer. Look for restrictions to imports and other limitations that you may need to brief to your passengers, such as no photography on the flight line, or whether military or civilian government employees require an official passport or visa. A handy item to jot down is the phone number of the embassy, consulate or defense attaché, in that country. They can be very helpful when schedule changes, maintenance or other problems arise, and you need access to DSN to contact your controlling agency. The FCG also addresses spraying for insects before landing. If you need to spray, be sure you get the proper insecticide before leaving home station.

A5.4.3. (Added-SCOTT) Flight Information Publication Area Planning. Use the volume that is appropriate for the area of operation. Check Section A, Regional Supplementary Procedures, Section B, FIR/UIR Supplementary Procedures, and Section C, National Supplementary Procedures, for the country you are traveling to and for those you overfly. Look for any special flight planning information, such as required remarks on flight plans, ETAs for boundaries that may be required, and transponder settings to be used. The Route and Area Restrictions Section and Additional Information Sections contain information applicable to over flight and when landing in that country. Finally, Supplementary Airport Remarks may be published for your destination or alternate. In some cases, the preferred routing between two countries is published in the listing for the country you overfly. Because information is spread out between the three sections and under many titles, area planning is full of "gotcha" types of information. A great example is a required radio call 5-minutes prior to entering Barranguilla FIR (Columbia), with the warning that "ATC will not offer safe control over aircraft that do not comply." You may easily miss that; it is buried under the heading "Position Reporting" in National Supplementary Procedures for Columbia. Don't forget the Planning Change Notices filed in the front of the book. They are published every 8 weeks and are cumulative (i.e., 16 weeks after a new Area Planning is published, there will be two PCNs to check until the next AP comes out at the 24-week point).

A5.4.4. (Added-SCOTT) Once you have studied all of the FLIP, FCG, etc., you will find yourself with a wealth of information. One tip to ensure making the right radio calls and squawking the right codes is to highlight points on your computer flight plan or AF Form 70, **Pilot's Flight Plan and Flight's Log (PDF)**, and note the requirements in the margin. It can also be helpful to take a few extra minutes when preparing for descent and review your notes on the destination and be sure you are prepared not only for the approach and landing, but also for your reception by customs and immigration officials at your destination.

A5.4.5. (Added-SCOTT) Intelligence. Arrange for an Intelligence briefing before your flight. Try to schedule it as soon as you know about the mission to give Intelligence personnel time to adequately research your destination. Air Force Instruction 11-401/AMC1, *Aviation Management*, requires the AC to certify that he or she has reviewed the Airfield Threat File. This action is done by initialing and dating your FCIF card.

**Attachment 6 (Added-SCOTT)****EPOS BRIEFING GUIDE**

**A6.1. (Added-SCOTT)** The Emergency Passenger Oxygen System (EPOS) Briefing Guide, **Table A6.1. (Added-SCOTT)**, will be used to brief passengers and patients. This briefing guide will be reproduced and inserted behind each AECM's AFI 11-2C-9V3 CL-3, *Patient/Passenger Briefings Guide*. A copy will also be placed in the mission kit for briefings in the event no AECMs are part of the crew complement and passengers are carried.

**Table A6.1. (Added-SCOTT) EPOS Briefing Guide.****EPOS BRIEFING**

1. In addition to our passenger oxygen provisions, this aircraft is equipped with the Emergency Passenger Oxygen System or EPOS. The EPOS is intended for use in the event of an in-flight or ground egress emergency in a smoke or toxic fume environment. Each seat is equipped with an EPOS located (state location).
2. Please direct your attention to \_\_\_\_\_, who will demonstrate donning the EPOS. When directed to don the EPOS, open the storage pouch and remove the vacuum-sealed bag by pulling the red tape. Remove the EPOS hood from the bag and unfold. Hold the EPOS hood with the neck seal (silver end) facing you. Pull the red ball with one hand while holding the oxygen cylinder with the other hand. The red ball and lever must pull free of the oxygen bottle. Spread the neck seal with palms facing each other. Push both hands inside to stretch it open. Pull the hood over your head and neck. Breathe normally.
3. While wearing the hood, you should hear a hiss for about 5 minutes after activating the oxygen cylinder. This lets you know that oxygen is flowing. If you do not hear a hissing sound after pulling the red ball, immediately remove the EPOS from your head. Sufficient oxygen will be supplied for an extended period of time when the hood is fully inflated.
4. Remove the EPOS when the hood collapses against your face, you are clear of the hazard, or you are directed to do so by aircrew personnel. Ensure your own EPOS is properly donned and operating correctly before attempting to assist others.

## **Attachment 7 (Added-SCOTT)**

### **C-9A FUEL CONSERVATION GUIDE**

**A7.1. (Added-SCOTT)** Since we are all responsible for conserving resources, the following techniques should be used, whenever possible, while operating the 375 AW C-9s.

#### **A7.2. (Added-SCOTT) Ground Operations.**

A7.2.1. (Added-SCOTT) Delay starting the auxiliary power unit (APU) until required to ensure patient comfort. When conditions at an en route station permit, request external power and shut down the APU. The APU burns an average of 350 pounds (52 gallons) of JP-8 per hour. At the military rate of 78 cents per gallon (FY98 cost), the estimated cost equates to roughly \$40 per hour. This cost may seem petty on the surface, but conscious effort from all pilots and flying crew chiefs could easily save 3 hours of APU use on all the C-9s flying on any given day. When taken over the period of 1 year, this action equates to saving over \$40,000 a year in aircraft fuel cost alone, not counting the maintenance savings of extended APU life. In comparison, the external electrical power cart uses on average 3.5 gallons per hour of Number 2 Diesel Fuel, at a fuel cost of a little more than \$3 per hour. Flying crew chiefs can greatly help the fuel conservation effort in this area by aggressively requesting and suggesting external power cart use at opportune locations.

A7.2.2. (Added-SCOTT) Single engine taxiing with delayed engine starts can save considerable fuel. The C-9 burns roughly 6 gallons per minute while taxiing. Both engines burn a combined 800-100 pounds of fuel per hour providing minimal thrust. A single engine will provide a greater amount of thrust per pound of fuel flow; here in lies the fuel savings. This taxi burn rate will not be exactly cut in half during single engine taxi; however, we could easily save 20 gallons at some locations because of long taxi times or ground delays. Plan on starting the second engine to provide for sufficient warm-up and so the "Before Takeoff" checklist can be completed without being rushed. Consider the safety tradeoff of having the other pilot "heads down" in the cockpit during a high workload or busy/congested taxi route when considering a delayed engine start. Having the flying crew chief in the cockpit for an extra set of eyes while one pilot is "heads down" is highly recommended. Flying crew chiefs can help the fuel conservation effort by aggressively querying about or suggesting single engine taxi procedures prior to engine start.

A7.2.3. (Added-SCOTT) Single engine taxi after landing should be the norm. However, do not shut down an engine unless it has been stabilized in idle for at least 2 minutes to prevent premature turbine and bearing degradation. The 2-minute stabilization time at idle is critical to prevent premature engine overhaul. In addition, if the engine was operated above 85 percent N2 rpm, Dash-1 guidance requiring a 5-minute cool-down period must be followed.

#### **A7.3. (Added-SCOTT) In-Flight Operations.**

A7.3.1. (Added-SCOTT) Keep unidentified fuel to a minimum. Expect to burn 3 to 4 percent of your tankered fuel every hour. This is equal to 150 to 250 pounds per hour at cruise.

A7.3.2. (Added-SCOTT) The Long Range Cruise Profile is to be used, whenever feasible. As a rule of thumb, "whenever feasible" means:

A7.3.2.1. (Added-SCOTT) The mission is not behind schedule and en route delays are not expected.

A7.3.2.2. (Added-SCOTT) Use of the Long Range Cruise profile will not significantly impact the mission schedule.

A7.3.2.3. (Added-SCOTT) The particular mission leg does not have a head-wind factor.

A7.3.3. (Added-SCOTT) Climbing to higher than flight-planned altitudes can yield the advantages of more nautical miles (NM) per 1,000 pounds of fuel and a longer time on the descent profile. The formula that the 375 AW C-9A Computer Flight Planning System uses [ $4 + (\text{Distance}/10)$ , rounded to the higher altitude if not correct for direction] assumes departure from a sea-level airport. Higher altitudes than planned can be beneficially achieved when departing the higher elevation airports on legs less than 300 NM. This technique is especially beneficial when both the departure and arrival airfields are more than 1,000 feet MSL. For example, consider the 215 NM leg from Mountain Home AFB ID to Hill AFB UT, flight planned at FL250. Since Mountain Home's elevation is 3,500 feet, you can easily climb to FL290 and still get cruise time at that level while achieving a higher TAS and more NM per pound of fuel than FL250. This option should always be considered on legs similar to the example when (1) no significant ATC altitude hold-downs have occurred, and (2) no significant increase in head winds will occur. Similarly, consider your destination field's elevation when considering your descent point to stay as high as you can, as long as you can. The flight planning "routes database" is being updated with higher altitudes on all legs similar to the example. This action is to be done as the routes are used. If you find a route where a higher altitude can be used, give the flight planners some feedback.

A7.3.4. (Added-SCOTT) Changing flight planned altitude to take advantage of more favorable winds should also be considered. As a rule of thumb, change altitude if you can gain greater than a 5-kt/per 1,000 feet wind advantage, when using Long Range Cruise or 8 kt/per 1,000 feet using .78 cruise. This action can be used to the best advantage on some of our westbound legs to "duck under" high jet stream-associated head winds during the winter months.

A7.3.5. (Added-SCOTT) Use the appropriate Cruise Charts whenever possible, and readjust the power setting to maintain the chosen speed/Mach Number Cruise Profile as fuel burns off (approximately every 20 minutes). Fuel savings of over 200 pounds per hour can be achieved by maintaining the proper Mach number on our longer legs.

A7.3.6. (Added-SCOTT) An optimum descent profile can have a profound impact on fuel consumption. Fuel savings occur when you "stay as high as you can, as long as you can" to a point you can use an idle 250 knots indicated air speed (KIAS) descent. Actually, just climbing to the optimum altitude and starting an immediate idle 250 KIAS descent and only spooling up the engines at 1,000 feet above ground level prior to landing, is the ultimate in a C-9 fuel savings profile. The ATC constraints, weather, and individual aircraft's pressurization system often limit use of these profiles, but the basic techniques can be used during all descents. In keeping with the "high as you can, long as you can" philosophy, simultaneously reaching an ATC crossing altitude and distance restriction saves fuel over reaching the altitude early and adding thrust to "drive" to the crossing restriction point. Even using drag devices with the throttles back to reach an altitude restriction will save fuel over "driving" to a restriction point. You can save fuel by delaying configuration and engine spool up in the terminal area prior to landing by keeping a slightly higher descent profile and using configuration to lose excess altitude. Fuel savings end during the final approach phase, never sacrifice a stabilized approach or

accept excess threshold speed. Begin your fuel-saving techniques again when clear of the runway. Using flaps 40 degrees for landing will save fuel due to decreased drag and thrust requirements, but the tradeoff is increased landing distances, brake wear, and possible reduced patient/passenger comfort. Flaps 40-degree landings should not be used if above normal or abrupt braking will become necessary to safely stop the aircraft or make desired runway exits.

**A7.4. (Added-SCOTT)** As a final word, fuel conservation should always be a consideration; however, never at the expense of safety. Always ensure enough fuel is available for planned flight time with appropriate reserves. Never put yourself in a position where a lack of fuel forces you to make a bad decision or causes unnecessary disruption to the mission. The above information was extracted from TO 1C-9A-1, TO 1C-9A-1-1, and *Douglas Service Special Supplement-DC-9 Series 20/30/40 Fuel Conservation*.