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AIR COMBAT COMMAND

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Flying Operations

E-9—OPERATIONS PROCEDURES

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SUMMARY OF CHANGES

Copilot Left Seat Authorization procedures have been added in **paragraph 3.4**. Removed or updated outdated hyperlinks throughout. Added reference to the E-9A MESL regulation in **paragraph 4.3**. Corrected mandatory callouts to reference TO 1-E-9A-1 in paragraph **5.11** and **5.20**. Updated verbiage referencing the Aviation Safety Action Program (ASAP) safety program in paragraphs **5.27**, **8.2** and **8.3**. Updated E-9A Communication, Navigation, Surveillance (CNS)/Air Traffic Management (ATM) approved operations in **Chapter 6** to reflect the upgraded Flight Management System (FMS). Clarified Cross-Country (X/C) refueling and servicing procedures in **paragraphs 6.7.2.3** and **Chapter 11**. Corrected and removed conflicting guidance in **Chapter 9** regarding simulated single engine approach weather requirements. Removed procedures regarding simulated loss of an engine immediately after takeoff and added prohibition in **paragraph 9.4.5**. Incorporated guidance regarding maximum bank angle to telemetry maneuvering procedures in **paragraph 6.5.4.6** and general operating limitations in **paragraph 9.9.3**. Updated references throughout and in **Attachment 1**.

Chapter 1

GENERAL INFORMATION

1.1. General. This publication provides policy for operating the E-9A aircraft. Use it in conjunction with the aircraft flight manuals, Flight Information Publications (FLIPs), AFMAN 11-202V3 as supplemented, and other governing directives. This volume prescribes procedures for E-9A aircraft under most circumstances but is not to be used as a substitute for sound judgment or common sense. Operations and/or procedures not specifically addressed may be accomplished if they enhance safe and effective mission accomplishment. When guidance in this publication conflicts with another basic/source document, that document takes precedence. For matters where this publication is the source document, waiver authority is IAW **paragraph 1.4**.

1.1.1. Unit commanders and agency directors involved with or supporting E-9A operations shall make current copies of this publication available to appropriate personnel.

1.2. Applicability. This publication applies to aircrew members, support personnel, contractors, and managers involved with employing E-9A aircraft.

1.3. Deviations. Deviations from these procedures require specific approval from the 53d Weapons Evaluation Group Commander (53 WEG/CC) unless an urgent requirement or an aircraft emergency dictates otherwise, in which case the aircrew will take the appropriate action to safely recover the aircraft.

1.4. Waivers. Unless specifically noted otherwise in the appropriate section, waiver authority for requirements of this volume is Air Combat Command Director of Operations (ACC/A3). Waivers, if approved, will be issued for a maximum of 1 year from the effective date. Air Combat Command Standardization and Evaluation Branch (ACC/A3TV) is Office of Primary Responsibility (OPR) on all waiver requests to this publication.

1.5. Instruction Changes: Submit recommendations for changes to this publication using DAF Form 847. Staff through the 53d Weapons Evaluation Group Standardization and Evaluation (53 WEG/OGV) for 53 WEG/CC for concurrence then through ACC/A3TV to ACC/A3 for final approval.

Chapter 2

COMMAND AND CONTROL (C2)

2.1. General. The ACC C2 system is based on the principles of centralized monitoring and decentralized control and execution. The result is a C2 mechanism which keeps the ACC commander informed of the current status of ACC forces while enabling the wing or group commander to exercise control over day-to-day operations. The C2 network consists of the 53rd Wing (53 WG) and the 53 WEG.

2.2. Execution Authority. Commanders with execution authority formulate plans, allocate assets, and approve Aircraft Commanders (ACs) to carry out directed or training missions through the C2 network. The 53 WEG/CC serves as the execution authority for local training missions. The Squadron Commander (SQ/CC) or the designated representative assigns unit missions to pilots in command. The AC is the final authority for proper mission planning and the safe conduct of the flight.

2.3. Aircraft Commander (AC) Responsibility and Authority. SQ/CCs shall designate an AC, Instructor Pilot (IP), or Evaluator Pilot (EP) as the AC for all flights, on a flight authorization form, IAW DAFMAN 11-401, *Aviation Management*, and applicable supplements. An unqualified or non-mission ready pilot may not be designated as AC. ACs are:

2.3.1. In command of all persons aboard the aircraft and responsible for the welfare of aircrew members, Mission Essential Personnel (MEP), and passengers.

2.3.2. Responsible for safe mission execution. The AC shall only fly events authorized by 82d Aerial Targets Squadron (82 ATRS) supervision (C2, which represents Operations Supervisor, Squadron Director of Operations (SQ/DO), SQ/CC and/or appropriate chain of command authorities), unless emergency condition demands otherwise.

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

2.3.4. The final authority for requesting and accepting aircrew or mission waivers. **(T-3)**

2.3.5. When flying out and back training missions, responsible for briefing the Operations Supervisor before flight, at the intermediate full stop(s), and after the last flight of the day (or upon returning to the squadron). When away from home station, this can be done via voice or text message.

2.4. Mission Clearance Decision. The execution authority and AC shall make the mission clearance decision. In all cases, final responsibility for the safe conduct of the mission rests with the AC. If an AC elects to delay a mission, that mission will not depart until the conditions that generated the decision to delay improve or are resolved. Further, no execution authority may task another AC to take the same mission under the same conditions.

2.4.1. Only re-route or divert a mission when authorized by the execution authority, to resolve an emergency, or if required by enroute or terminal weather conditions.

2.4.2. The agency that directed the re-route or divert shall ensure the aircraft is capable of executing departure, enroute, and destination arrival procedures.

2.4.3. The AC will notify the appropriate C2 agent of any aircraft or aircrew limitation that may preclude re-route or divert.

2.5. Diversion. When a C2 agent directs an AC to fly to an alternate airfield, the agent will ensure existing and forecast weather for the alternate, Notices to Airmen (NOTAMs), and airfield information from the Airfield Suitability and Restrictions Report (ASRR) is suitable. If the alternate becomes unsuitable while enroute, the AC will coordinate with the C2 agent for other suitable alternates. The AC is final authority for accepting a suitable alternate. A C2 agent will alert all appropriate ground service agencies of the aircraft's impending arrival.

Chapter 3

AIRCREW REQUIREMENTS

3.1. Aircrew Qualification. Primary aircrew members, or those occupying a primary position during flight, must be qualified or in training for qualification in that crew position and mission. If non-current or in training for a particular event, the aircrew member must be under the supervision of an instructor while accomplishing that event (direct supervision for critical phases of flight). Additionally, commanders and key supervisors under the direct supervision of an instructor may occupy a primary position IAW DAFMAN 11-401, paragraph 8.2.3 through and including paragraph 8.2.3.4.. Refer to DAFMAN 11-401 for procedures and requirements governing senior leader flying.

3.2. Crew Complement:

3.2.1. Minimum Crew. The minimum crew is two pilots. Mission system operators will fly dependent upon mission requirements.

3.2.2. Aircrew members will occupy their respective seats during takeoff, approach, landing, climb and descent, emergencies (simulated and actual), and turbulent flight conditions.

3.3. Pilots. An IP must supervise non-current or unqualified pilots regaining currency or qualification (direct IP supervision during takeoffs, landings and Emergency Procedures (EPs).

3.3.1. Missions with Passengers. To occupy a pilot's seat with passengers aboard, pilots must have a current AF Form 8, *Certificate of Aircrew Qualification*, for the E-9A Mission Design Series (MDS). For takeoff, approach and landing one of the following conditions must be met:

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

3.3.1.2. A qualified pilot non-current no more than 60 days for flying currency requirements and an IP providing direct supervision (must be at the controls). ACs regaining currency may be designated AC.

3.3.1.3. A qualified Basic Mission Capable (BMC) pilot accomplishing mission qualification training (MQT) and an IP providing direct supervision.

3.3.1.4. A qualified AC upgrade candidate on an initial or requalification mission and a qualified IP with direct supervision of the controls.

3.4. Copilot Left Seat Authorization. Experienced copilots may be authorized to fly in the left seat to gain experience prior to starting AC Upgrade. Candidates must be experienced (at least 100 hours in the E-9), and perform a Cockpit Procedures Trainer (CPT) and Emergency Procedures Trainer (EPT) with an instructor prior to the first flight in the left seat. An IP must occupy the right seat for all flights using this provision.

3.5. Non-Current or Unqualified Pilots. An IP must be seated at a primary crew position with access to the flight controls while supervising non-current or unqualified pilots regaining currency or qualification.

3.6. Non-Current or Unqualified Mission Systems Operators (MSO). Non-current and/or Unqualified MSOs will fly with a current and qualified Instructor Mission Systems Operator

(IMSO) at their respective station. MSOs in training will have an IMSO providing direct supervision.

3.7. Orientation Flights. Orientation Flights will be conducted IAW DAFMAN 11-401 as supplemented. All orientation participants will be briefed IAW **Attachment 2**. Rated pilots provided access to the controls during critical phases of flight will accomplish BOLDFACE, normal and critical action procedures training in the cockpit with an IP prior to flight.

3.8. Duty Periods. Flight Duty Period (FDP) is per AFMAN 11-202V3. No planned touch-and-go or practice/simulated EPs will be accomplished after the FDP extends past 12 hours.

3.9. Scheduling Restrictions. Aircrew scheduling will be IAW AFMAN 11-202V3 Chapter 4.

Chapter 4

AIRCRAFT OPERATING RESTRICTIONS

4.1. Objective. This chapter applies to accepting an aircraft from maintenance prior to launch. 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, under specific circumstances, some missions can be safely operated without all equipment being operational. Minimum equipment will be as established in the Minimum Essential Subsystem List (MESL), the Master Minimum Equipment Listing (MMEL), and/or maintenance guidance. The AC is responsible for ensuring equipment required for safe flight is operable.

4.2. Master Minimum Equipment Listing (MMEL) Guidance. The DeHavilland Master Minimum Equipment List MMEL is a pre-launch document that lists the minimum equipment/systems to operate the DHC-8® aircraft and does not include Mission Equipment. This is located on the Electronic Flight Bag (EFB). It is impractical to prepare a list that would anticipate all possible combinations of equipment malfunctions and contingent circumstances. Consider equipment/systems with no listed exceptions as grounding items. An AC who accepts an aircraft with degraded equipment/systems is not committed to subsequent operations with the same degraded equipment. ACs are not committed to operations with degraded equipment accepted by another AC.

4.2.1. The AC is responsible for exercising the necessary judgment to ensure no aircraft is flown with multiple items inoperative that may result in an unsafe degradation and/or an undue increase in workload. The AC shall account for the possibility of additional failures during continued operation with inoperative systems or components. The MMEL is not intended for continued operation over an indefinite period with systems/subsystems inoperative. Safety of flight is paramount.

4.2.2. All required emergency equipment will be installed unless specifically exempted by mission requirements/directives.

4.3. E-9A Minimum Essential Subsystem List MESL. *Equipment Inventory, Status and Utilization Reporting E-9A Minimum Essential Subsystem List (MESL),* applies to E-9A aircraft and lists the minimum equipment and systems to launch the aircraft under routine operations. The MESL does not include all equipment or systems essential to airworthiness. The MESL is not intended to promote continued operation of the aircraft for an indefinite period with systems/subsystems inoperative. The MESL is available at: **https://usaf.dps.mil/sites/ACC-A4/A4M/A4PM/AFI%2021123%20ACCSUP%20MESL/Forms/AllItems.aspx?viewpath=%2Fsites%2FACC-A4%2FA4M%2FA4PM%2FAFI%2021123%20ACCSUP%20MESL%2FForms%2FAllItems.aspx**

4.4. Waiver Protocol. Waivers to operate with degraded equipment may be granted on a case-by-case basis and only in exceptional circumstances. Waiver authority is based on who has Operational Control (OPCON) and execution of the aircraft performing a specific mission. The AC determines the need for a waiver and initiates the request.

4.4.1. Local Missions (Executed by 53 WEG/CC). Waiver authority for local missions is the 53 WEG/CC or designated representative. **(T-3)**

4.4.2. ACC-Directed Missions (including ACC Operational Readiness Inspections). Waiver authority is ACC/A3. **(T-2)**

4.4.3. Other Missions. Aircrew members may request additional assistance or confirmation from their home units or ACC.

4.5. Technical Assistance Service.

4.5.1. The AC may (at any time in the decision process) request technical support and additional assistance from their home unit and/or maintenance representatives.

4.5.2. ACs electing to operate with degraded equipment or aircraft systems (with appropriate waiver, if necessary) must coordinate mission requirements (revised departure times, fuel requirements, maintenance requirements, etc.) with the C2 agency before flight.

4.6. Aircraft Loading/Cargo Handling. Passenger and cargo loading will be IAW **Chapter 12** of this manual.

4.6.1. Cargo, including baggage, will be safely secured prior to taxi.

4.6.2. Ensure a weight and balance computation is accomplished if cargo/passengers change the standard configuration weight and balance on aircraft.

4.7. Transportation of Passengers. Passengers are limited to personnel authorized IAW DAFMAN 11-401_ACCSUP, *Aviation Management*, and approved by the Wing Commander (WG/CC). Orientation flights may be accomplished IAW DAFMAN 11-401_ACCSUP.

4.8. Passenger Manifest. The AC is responsible for ensuring a copy of the manifest is filed with a responsible agency at the departure point, and that sufficient copies of the manifest are in their possession before departure. This will normally be the 82 ATRS Operations Supervisor.

4.9. Maintenance and Inspection Records Review. The Air Force Technical Order (AFTO) Form 781, *ARMS Aircrew/Mission Flight Data Document*, sections A, F, H, J, AND K, will be available at the aircraft when the crew reports to visually inspect the aircraft. No aircraft system will be activated without a pilot first reviewing the AFTO Form 781H, *Aerospace Vehicle Flight Status and Maintenance* and AFTO Form 781A, *Maintenance Discrepancy and Work Document*.

Chapter 5

OPERATIONAL PROCEDURES

5.1. Checklists.

5.1.1. Accomplish all checklists with strict discipline. A checklist is not complete until all items have been accomplished and all crewmembers have called it complete. Momentary hesitations for coordination items, Air Traffic Control (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. Aircrew will use approved AFTOs and Checklists produced by Tinker Air Force Base, OK.

5.1.2. Unit Developed Checklists/Local Pilot Aids are authorized and will be used for all local flights.

5.2. Duty Station. A qualified pilot will be in control of the aircraft at all times during the flight. (**Exception:** Unqualified pilots undergoing qualification training). Only one pilot may be absent from their duty station at a time. During non-critical phases of flight, aircrew members will notify the pilot before leaving and after returning to their duty stations.

5.3. Emergency Exits and Safety Aisles:

5.3.1. The emergency cabin exits and cabin safety aisle will remain unobstructed during flight. Note: Aircraft telemetry antenna modification blocks a portion of the right side emergency exits.

5.3.2. Cargo will be loaded so as to provide an unobstructed safety aisle from the cockpit to the rear of the aircraft.

5.4. Safety Belts, Shoulder Harness and Life Vests. The AC will ensure crew members and passengers have safety belts securely fastened during takeoffs, approaches, landings, simulated emergencies and when turbulence is encountered or anticipated.

5.4.1. When occupying their crew position, the pilot and copilot will have safety belts and shoulder harnesses fastened at all times below 5,000 feet Above Ground Level (AGL). Shoulder harnesses may be removed above 5,000 feet AGL.

5.4.2. Life vests will be located in the immediate vicinity of the crew during over water flights so as to be accessible and worn when directed by the AC.

5.5. Missions with Passengers.

5.5.1. See **paragraph 3.3.1** for pilot qualification requirements.

5.5.2. Pilots shall not conduct emergency procedure patterns, touch-and-go, or stop-and-go landings with passengers on board. Emergency procedure training, touch-and-go and stop-and-go landings are authorized with MEPs on board.

5.6. Landing Gear and Flap Operating Policy. The pilot flying (PF) the aircraft will command configuration changes. The pilot not flying (PNF) the aircraft will verify appropriate airspeed and configuration prior, then echo the gear and/or flap actuation command, and finally, actuate the appropriate switch.

5.7. Jumpseat/Observer Duties. Available crewmembers/passengers should assist in clearing during taxi operations, and any time the aircraft is below 10,000 feet Mean Sea Level (MSL) (provided it does not distract the pilots).

5.8. Communications Policy. Crewmembers are expected to maintain a high degree of cockpit professionalism and crew coordination at all times.

5.8.1. Challenge and Response. IAW TO 1E-9A-1, *Flight Manual USAF Series E-9A Aircraft*, and local governing directives.

5.8.2. Sterile Cockpit. Limit conversation to that essential for crew coordination and mission accomplishment during taxi, takeoff, approach, landing, and any flight below 400 feet AGL.

5.8.3. Only aircrew-essential communications are permitted from commencement of the takeoff roll until passing an altitude of 400 feet AGL. This applies during touch-and-go or stop-and-go landings also.

5.9. Aircraft Interphone. Primary crewmembers will monitor interphone (Net 1) during critical phases of flight. Crewmembers will advise the PF before checking off Net 1 and notify him or her of which Net will be monitored.

5.10. Radios.

5.10.1. The PNF normally makes all ATC radio calls.

5.10.2. In terminal areas, all crewmembers (if able) will monitor the primary radio unless directed otherwise.

5.10.3. The pilot operating the radios will notify the crew which radio is primary, and update the crew when the primary radio changes.

5.10.4. Both pilots will monitor UHF guard emergency frequency.

5.11. Advisory Calls. The PF will periodically announce intentions during departures, arrivals, approaches, and when circumstances require deviating from normal procedures. Mandatory calls will be IAW TO 1E-9A-1.

5.12. Runway Criteria. The AC is responsible for determining that all airfield facilities are of suitable construction, width, length between barriers, and weight bearing capacity for normal operations.

5.12.1. Minimum Runway Width: 75 feet for normal operations. If mission requirements dictate (e.g., depot maintenance input) the 82d Aerial Targets Squadron Commander (82 ATRS/CC) can approve down to 60 feet width with enhanced risk mitigation in place (an IP will be at a set of flight controls).

5.12.2. Minimum Taxiway Width: 35 feet.

5.13. Barrier Operations. Takeoff, touch-and-gos, and landings over a raised cable are not authorized due to restricted clearance of the Sea Surveillance Radar (SSR) dome. Taxiing over a raised cable is permitted and will be executed with caution at the discretion of the AC.

5.14. Minimum Takeoff Runway. The accelerate-stop distance corrected by Runway Condition Reading (RCR) must be less than 80% of usable runway available.

5.15. Minimum Landing Runway. The computed landing distance must be less than 80% of the useable landing distance (without propeller reverse) corrected for RCR.

5.16. Landing Surface. Operations from other than hard surfaced runways are not authorized.

5.17. Crosswind Limitations. Table 5.1 will be used to determine maximum crosswind component allowed for takeoffs, full stop landings, and touch and gos.

Table 5.1. Crosswind Limits.

MAXIMUM CROSSWIND IN KNOTS		
RCR	**Full Stop**	**Touch and Go**
26-23 (Dry)	20	15
15-12 (Wet)	15	10
11-09	10	Touch and go not authorized
08-05 (Ice/Snow)	05	Touch and go not authorized
04-01	Takeoff/landing not authorized	Touch and go not authorized

5.18. Maximum Gross Weights. Operating weights will be IAW the flight manual weight, altitude, and temperature limits. These limits will not be exceeded.

5.19. Transfer of Aircraft Control. Will be positive and verbally confirmed. The following information will be relayed: Aircraft altitude, heading, airspeed, primary navigational aid, and status of the autopilot.

5.20. Altitude Monitoring. When climbing or descending the PNF will call 1,000 feet above/below and level off altitude. The PNF will inform the PF anytime the indicated altitude varies more than 100 feet from the desired altitude, or if the aircraft appears to be dangerously close to terrain or obstructions. During an instrument approach, comply with monitoring guidance in TO 1E-9A-1 (altitude +/- 50ft, course +/- 10 degrees, airspeed +/- 10 Knots Indicated Air Speed [KIAS]).

5.21. Landings. All landings will be made with 15 degrees of flaps unless an emergency dictates otherwise. Ensure sufficient runway is available beyond any barrier to permit a full stop landing without use of reverse.

5.22. Touch-and-Go Landings. Touch-and-go landings are authorized on runways with 6,000 feet of landing distance available and runways with 6,000 feet between barriers.

5.23. Radar Altimeter.

5.23.1. Any crewmember detecting the illumination of the radar altimeter Low Altitude Warning Light will immediately notify the PF. Terrain clearance and aircraft position must be verified.

5.23.2. Before departure set the radar altimeter for 400 feet return.

5.23.3. The pilot and copilot will use the same radar altimeter setting unless briefed otherwise.

5.23.4. Set the radar altimeter to the Height Above Touchdown(HAT)/Height Above Airport (HAA) during instrument approaches.

5.24. Traffic Alert and Collision Avoidance System (TCAS). TCAS will be tested and audio monitored prior to and during flight if equipped. It is imperative to follow Resolution Advisories (RAs) to obtain aircraft separation computed by TCAS. Failure to follow the computed RA may increase the probability of a midair collision. Pilots who deviate from an ATC clearance in response to an RA shall notify ATC of the deviation as soon as practical and promptly return to the ATC clearance when the traffic conflict is resolved or obtain a new clearance.

5.25. Cockpit/Crew Resource Management (CRM) Assertive Statement "Knock it Off".

5.25.1. "Knock it Off" is the common assertive statement for use by all crewmembers. The use of "Knock it Off" will:

5.25.1.1. Provide a clear warning sign of a deviation, loss of situational awareness, or dangerous situation developing.

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

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

5.25.2. As soon as possible after a "Knock it Off" has been called, the aircrew will take the following actions:

5.25.2.1. Safety permitting, stabilize the aircraft and ensure terrain clearance.

5.25.2.2. The initiating crewmember will voice their concerns to the crew.

5.25.2.3. The AC will provide all other crewmembers with the opportunity to voice inputs relative to the stated concerns.

5.25.2.4. After considering all inputs, the AC will direct the aircrew to continue the current course of action or direct a new course of action.

5.26. Operational Risk Management (ORM). ORM is a logic based, common sense approach to making calculated decisions on human, material, and environmental factors before, during, and after all operations. ACC's policy on risk management during flying operations is contained in AFMAN 11-290_ACCSUP, *Cockpit/Crew Resource Management Program and Threat & Error Management Program*. ACs are responsible for assessing ORM before flight IAW Major Command (MAJCOM) and local guidance as part of preflight activities.

5.27. Aviation Safety Action Program (ASAP). The Military ASAP is an identity-protected, self-reporting system modeled after successful the Federal Aviation Administration (FAA)/Airline programs to encourage the voluntary reporting operational issues and events. It is designed to provide a non-punitive environment for the open reporting of safety concerns and information that might be critical to identifying hazardous situations and precursors to accidents. These safety concerns may be either observed or experienced by the submitter. The goal is to prevent mishaps by addressing those unintentional errors, hazardous situations and events, or high-risk activities not identified and/or correctable by other methods or through traditional safety reporting sources. The ASAP website is accessible at **https://saferep.safety.af.mil/**. Crewmembers can submit comments via the Comment/Feedback link or the SAFEREP app on the EFB.

Chapter 6

AIRCREW PROCEDURES

6.1. General.

6.1.1. Procedures in this chapter are to be used on E-9A missions. The procedures are designed to provide aircrews with standard methods of operation under normal conditions. The AC is the final authority to operate other than standard if the situation dictates.

6.1.2. Communication, Navigation, Surveillance (CNS)/ATM approved operations. The UNS-1Lw and ADS-B modifications have been installed on both aircraft. See **Table 6.1** for a complete list of E-9A CNS/ATM approved operations.

Table 6.1. Aircraft with UNS-1Lw and Automatic Dependent Surveillance – Broadcast (ADS-B).

Airspace/Equipment Type	Certified	Operational Approval	Pilot Training Required	Additional Information
Category II/III Instrument Landing System (ILS)	No	No	N/A	
Frequency Modulation (FM) Immunity	Yes	Yes	No	
8.33 Radios	No	No	No	
Mode S	Yes	Yes	Yes	Training incorporated into initial qualification
TCAS Version 7	Yes	Yes	Yes	Training incorporated into initial qualification
RVSM	No	No*	N/A	*In the US, operations at RVSM altitudes are authorized on a case by case IAW AIM 4-6-10.
MNPS	No	No	N/A	
RNAV/GPS Enroute/Terminal	Yes	Yes	Yes	Training incorporated into initial qualification.
Remote Oceanic	No	No	No	
[1]RNAV 10	No	No	No	Oceanic and Remote Continental application.
[2]Required Navigation Performance (RNP) 4	No	No	N/A	Oceanic and Remote Continental application. Requires ADS-C.

Airspace/Equipment Type	Certified	Operational Approval	Pilot Training Required	Additional Information
[1]Basic RNAV (B-RNAV)	Yes	Yes	No	European Region, RNP 5.
[1]RNAV 5	Yes	Yes	No	Middle East Region, RNP 5.
[2]RNP 2	Yes	Yes	No	US National Airspace System (NAS) enroute
[2]RNP 1	Yes	Yes	No	US NAS terminal
RNAV/GPS Approaches or ICAO [2]RNP Approach (APCH)	Yes	Yes	Yes	Training incorporated into initial qualification. Assumes: 1) Initial, Intermediate and Missed Approach (MA) segments 2) Final segment RNP ≥ 0.3require RNP ≥1.0 3) Final segment has no Radius-to-Fix (RF) legs 4) Authorization Required (AR) not noted.
Localizer Performance with Vertical Guidance (LPV) or Localizer Performance (LP)	Yes*	Yes*	Yes	Local training.
Lateral Navigation (LNAV)/Vertical Navigation (VNAV)	Yes	Yes	Yes	Local training.
Airspace/Equipment Type	**Certified**	**Operational Approval**	**Pilot Training Required**	**Additional Information**
LNAV	Yes	Yes	No	

Airspace/Equipment Type	Certified	Operational Approval	Pilot Training Required	Additional Information
[2]RNP Authorization Required (AR) Approach or Special Aircraft and Aircrew Authorization Required (SAAAR) Approach	No	No	N/A	Requires special aircrew qualification and onboard database. Includes any of the following: 1) Initial, Intermediate and MA segments require RNP < 1.0 2) Final segment RNP < 0.3 3) Final segment may contain Radius-to-Fix (RF) legs 4) Authorization Required (AR) noted

Notes:
1. Area Navigation (RNAV) refers to installed and certified navigation equipment specification.
2. Required Navigation Performance (RNP) refers to installed and certified navigation equipment specification with a requirement for on-board performance monitoring and failure alerting capability.

6.2. Pre Mission.

6.2.1. Aircrew Uniform.

6.2.1.1. Aircrew will wear the aircrew uniform, as outlined in Department of the Air Force Instruction (DAFI) 36-2903, *Dress and Personal Appearance of Department of the Air Force Personnel*, and the ACC supplement on all missions unless otherwise authorized.

6.2.1.2. All aircrew members must have flight gloves available to wear during critical phases of flight and as deemed necessary by the AC. Because of the inherent protection afforded, crewmembers are encouraged to wear gloves at all times in the aircraft.

6.2.2. Flight Planning Procedures. Aircrews will perform mission planning in sufficient detail to ensure safe and efficient mission accomplishment to include:

6.2.2.1. Weight and Balance Clearance Form. Pre-computed Department of Defense (DD) Forms 365-4, *Weight and Balance Clearance Form F*, (or equivalent) are permitted. They must be available for ready reference and kept current IAW the contractor's maintenance plan. The AC is responsible for ensuring the center of gravity is within specified limits for all flights.

6.2.2.2. Weather Briefing. The AC is responsible for the best information available concerning weather, trends, and forecast for takeoff, the proposed route, destination, buoy data for mission sorties, and alternate airfields.

6.2.2.3. Takeoff and Landing Data (TOLD) Computations. A TOLD card will be computed for every mission and will cover the conditions existing at the takeoff location.

6.2.2.4. Flight Crew Information File (FCIF).

6.2.2.4.1. Crewmembers will review FCIF, Volume 1, before all missions or ground aircrew duties, and update the FCIF currency record with the latest FCIF item number, date, and crewmember's initials.

6.2.2.4.2. **Note:** Electronic signatures, Omni Patriot Excalibur (Omni PEX), or any Operations Group Standardization and Evaluations office (OGV) directed Sign-Off, may be used on FCIFs.

6.2.2.5. Flight Kit Requirements. The entire mission kit may be stored electronically on an approved ACC EFB device. **(T-2)** EFB devices will be maintained IAW ACCI 11-270, *Operations Mobile Devices (OMDs)*. Additionally, aircrew are encouraged to carry Stratus Pucks or comparable devices to aid in real time traffic and weather information via the EFB devices. Aircrews will ensure all appropriate forms are available for their respective mission type and route. **(T-3)** Current copies of the following items will be loaded on the EFB devices:

6.2.2.5.1. AFMAN 11-202V3 and AFMAN 11-202V3_ACCSUP, *Flight Operations*.

6.2.2.5.2. Aircraft Flight Manuals (TO 1E-9A-1, TO 1E-9A-1CL-1 *Pilot's Abbreviated Flight Crew Checklist USAF Series E-9A Aircraft*, TO 1E-9A-43-1-1 *Flight Manual Mission Crew Telemetry and Sea Surveillance Radar Operator USAF Series E-9A Aircraft*, TO 1E-9A-43-1-1CL-1 *Telemetry and Sea Surveillance Radar Operator Abbreviated Mission Crew Checklist USAF Series E-9A Aircraft*).

6.2.2.5.3. Operating Data Manual (DeHavilland Manual).

6.2.2.5.4. Master Minimum Equipment List (MMEL) FAA DHC-8-100.

6.2.2.5.5. AFI 21-103 ACCSUP ADDENDUM Q.

6.2.2.5.6. FLIP terminal instrument approach procedures for the operating area of the aircraft.

6.2.2.5.7. FLIP enroute charts.

6.2.2.5.8. FLIP enroute supplement.

6.2.2.5.9. Pilot's Flight Plan and Flight Log (AF Form 70, *Pilot's Flight Plan and Flight Log*) or approved substitute (e.g., stereo routing).

6.2.2.5.10. FLIP Standard Instrument Departures (SIDs) and FLIP Standard Terminal Arrival Routes (STARs).

6.2.2.5.11. 53 WEG Tyndall AFB In-Flight Guide.

6.2.2.5.12. Supplemental weight and balance handbook to include a DD Form 365-4 (or equivalent) with standard setups (e.g., 2 pilots, 2 crew, and a full fuel load).

6.2.3. Mission Planning: A pilot will attend the Weapon System Evaluation Program (WSEP) pre-briefs unless missions dictate not attending. The AC is responsible for gathering all pertinent mission information. For non-WSEP missions, the MSO and AC (if able) should

coordinate mission requirements with the customer. The AC is responsible for the completion of all mission planning for continuation training and out-and-back missions.

6.3. Pre-departure.

6.3.1. Preflight. The AC ensures the following are accomplished before departure.

6.3.2. Briefing/Debriefing:

6.3.2.1. The AC is responsible for presenting a logical briefing that will promote safe, effective mission accomplishment and crew coordination. All crewmembers will attend these briefings unless excused by the AC. Regardless, all crewmembers will be briefed prior to engine start. Briefing guides will be used to provide the briefer with a reference list of items that may apply to particular missions. Items listed may be briefed in any sequence. The briefer should tailor the briefing to the experience level of the aircrew participating in the mission as well as the difficulty of the mission.

6.3.2.2. The crew briefing should occur no later than (NLT) one hour prior to planned takeoff. All crew members should come to the crew briefing knowing what is needed to accomplish their portion of the mission. The main focus of the crew briefing should be a discussion on how the crew will act as a team to best accomplish the particular mission safely.

6.3.2.3. An alternate mission will be briefed for each flight. Other than basic instrument and transition sorties, specifically brief the Operations Supervisor for approval of alternate mission profile.

6.3.3. AFTO Forms 781 Series. Review AFTO Forms 781 series before applying power to the aircraft or operating aircraft systems. Any exceptional release must be signed before flight. Authorized maintenance personnel are responsible for signing the exceptional release. If one of these individuals is not available, the AC may sign the exceptional release. Ensure that the DD Form 1896, *DoD Fuel Identaplate*, and Multi Service Corporation (MSC) AIR Card are aboard the aircraft.

6.4. Departure.

6.4.1. Taxi. All checklists will be accomplished IAW applicable flight manuals and local governing directives.

6.4.1.1. The reverse taxi capability of the E-9 will not be utilized, except in an emergency.

6.4.1.2. Aircraft will not be taxied with malfunctions that affect the gear, the nose wheel steering, or brake systems.

6.4.2. Takeoff, Departure, Climb, and Cruise:

6.4.2.1. Takeoff, Departure, and Climb Briefing. The pilot performing the takeoff, departure, and climb will accomplish this IAW Squadron Standards for local sorties or TO 1E-9A-1CL as required for off station sorties.

6.4.2.2. Takeoff. Takeoff weather minimums will be IAW AFMAN 11-202V3_ACCSUP.

6.4.2.3. Weather Minimums for Takeoff: See **Table 6.2** below.

Table 6.2. Weather Minimums for Takeoff.

MISSION	VISIBILITY	REMARKS
WSEP/Operational Test & Evaluation (OT&E)/Developmental Test & Evaluation (DT&E)	1000 feet RVR	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	1600 feet RVR	For runways with more than one operating RVR readout, RVR must read 1600 feet minimum on all.
Notes: If no Runway Visual Range (RVR) readout is available for the departure runway, visibility must be reported to be 1/2 statue mile (800 meters). When weather is below approach and landing minimums (ceiling or visibility) a takeoff alternate is required (See AFI 11-202V3_ACCSUP, paragraph 5.1.1.3.)		

6.4.2.4. Takeoff flap setting will be 5 degrees unless runway or climb out requirements dictate otherwise.

6.4.2.5. Mandatory callouts will be IAW this volume and TO 1E-9A-1 Section 2.

6.4.2.6. Engine-Out Takeoff. Engine-out takeoffs are not authorized.

6.4.3. Takeoff Aborts. If a takeoff abort occurs (regardless of airspeed), the crew will accomplish the full stop taxi-back checklist if another takeoff will be attempted. Determine maximum braking energy and consider the possibility of cumulative effects of hot brakes if a subsequent abort occurs.

6.4.4. On-Time Takeoffs. Mission departures are on time if the aircraft is airborne within 15 minutes of scheduled takeoff time.

6.4.5. Early Departures. Early departures are authorized to prevent a delay due to weather, ATC restrictions, airfield or aircraft operational limitations, to adjust mission flow during a large-scale operation, or if approved through the customer unit if flying WSEP, OT&E, or DT&E missions. Training missions including out and backs do not require coordination and an early departure as long as the 82 ATRS operations supervisor is on duty and the tower is open.

6.4.6. In-flight EPs. The AC shall report deviations from directives that may occur as a result of an emergency according to AFMAN 11-202V3_ACCSUP and this publication. Time and conditions permitting, inform passengers of the situation and intentions.

6.4.6.1. During an emergency situation, the PF will continue to fly the aircraft. **(T-2)** The AC may take control of the aircraft if the situation dictates. The AC will assign specific duties based on the situation. **(T-2)** The AC should conduct the emergency landing unless conditions do not permit. **(T-2)**

6.4.6.2. The PNF should be the primary aircrew member responsible for executing emergency checklist procedures. The PF maintains aircraft control and calls for appropriate critical action procedures and checklists. The PF will confirm any switches or levers prior to being actuated.

6.4.6.3. When practical after completing the aircraft emergency action checklists and associated actions, the PNF shall furnish ATC and appropriate C2 agencies with a description of the difficulty, assistance required, intentions, and any other pertinent information. Follow TO 1E-9A -1 guidance for emergency procedure actions.

6.4.7. Air Aborts. The mission will be aborted, regardless of apparent damage or subsequent normal operation, for any of the following:

6.4.7.1. Birdstrike/Foreign Object Damage.

6.4.7.2. Flight control system malfunctions.

6.4.7.3. Engine flameout or unplanned shutdown.

6.5. Enroute/Mission Execution.

6.5.1. Flight Progress. In-flight, use all available navigational aids to monitor Flight Management System (FMS) performance. Immediately report malfunctions or any loss of navigation capability that degrades centerline accuracy to the controlling Air Route Traffic Control Center (ARTCC).

6.5.2. Operations Under Adverse Conditions. The following guidance will be strictly adhered to:

6.5.2.1. Thunderstorms. There is no mission which requires intentional penetration of a thunderstorm. Aircrews will follow guidance in AFMAN 11-202V3/AFMAN 11-202V3_ACCSUP.

6.5.2.2. When performing approaches and landings at locations where temperatures are 0 degrees C or below, refer to the Flight Information Handbook (FIH) Section D, Temperature Correction Chart, to correct Minimum Descent Altitude (MDA), Decision Height (DH), and other altitudes inside the Final Approach Fix (FAF). Additional procedures for temperature corrections beyond the requirements listed in the FIH are contained in AFMAN 11-202V3/AFMAN 11-202V3_ACCSUP.

6.5.2.3. Do not fly into an area of known or forecast moderate or greater mountain wave turbulence.

6.5.2.4. 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 2000 feet, avoid them by at least:

6.5.2.4.1. 20NM at or above flight level (FL)230.

6.5.2.4.2. 10NM below FL230, or:

6.5.2.4.3. 5NM is within the terminal area and no known effects of the storm are between the aircraft and the airfield and the MA path.

6.5.3. Range Patrol:

6.5.3.1. Normally initial range patrol is conducted at 1600 feet but as required to remain below low cloud decks to ensure proper radar coverage. If radio Line of Sight (LOS) becomes an issue (normally south of the N29.00.00 latitude line) climbing to higher altitudes should help to maintain radio contact with the controlling agency.

6.5.3.2. After the initial range patrol, the SSR operator will receive "boats of interest" (BOI) information from the Range Safety Officer (RSO) and coordinate with the crew on verifying contacts. The radar operator should pass current latitude, longitude, heading, and speed of the BOI to the RSO if the contacts pose a threat to the shoot track. If the radar system is not able to keep updates on the BOI, the radar operator will convey this to the RSO and pilots as soon as possible. The pilots will provide a stable platform and make every attempt to allow the radar system to update all BOI. If the crew believes that they will be unable to update a BOI for a period longer than 30 minutes, the SSR operator (callsign "Vanna") will inform the RSO. This call will include the contact number and the last time of known update.

6.5.4. Telemetry Receiving/Recording/Relaying:

6.5.4.1. The crew should hold at the altitude and standoff distance discussed in mission planning, unless conditions dictate otherwise.

6.5.4.2. Telemetry gathering may dictate bringing the wing up or down to improve telemetry data quality. Pilots may either use the rudder trim or manually step on the rudder to bring the wing up or down.

6.5.4.3. Care must be exercised when changing power during telemetry collection.

6.5.4.4. As airspeed decreases below 135-130 KIAS the outboard spoilers become effective. If the aircraft is in a slip to bring the wing up for telemetry collection and the plane slows through this speed the spoilers become effective immediately and bobble the wing. This bobble equates to decreased performance of the telemetry antenna and therefore transitioning through these speeds should be avoided during telemetry receiving.

6.5.4.5. Minimum airspeed of 1.3 Stall Speed (VS) will be observed. Landing gear horn actuation should be avoided.

6.5.4.6. Telemetry track reset turns using up to 60 degrees of bank are authorized during day Visual Meteorological Conditions (VMC) only. In conditions other than day VMC, limit bank angle to 45 degrees.

6.5.5. UHF Relay: The E-9A is equipped with 4 UHF radios capable of relaying two different pairs of frequencies. Two of the four radios are labeled Air-to-Ground; the other two are labeled Air-to-Air. Each-Air to-Ground radio is paired with an Air-to-Air radio to allow for the relay. Due to this set up, radios are described as Air-to-Air 1, Air-to-Ground 1, Air-to-Air 2, and Air-to-Ground 2. Do not tune/transmit on UHF 2 radio (copilot's side) if the same frequency is in one of the Air-to-Ground radios. The Air-to-Ground radio antennas and the UHF 2 antenna are in close proximity and could damage each other when simultaneously transmitting. If a SSR operator is aboard, the AC may designate him or her with UHF relay operation responsibilities.

6.6. Arrival.

6.6.1. Descent.

6.6.1.1. Before starting each approach, the PF will brief the procedures to be followed during approach, landing, and Go-Around (GA)/MA as necessary. **(T-2)** Performance data will be reviewed. **(T-2)** This briefing should be accomplished prior to the completion of the "Before Landing Checklist.". **(T-2)**

6.6.1.2. Both pilots flying the approach will set the radio altimeter MDA index to the HAT or HAA for the approach being flown.

6.6.2. Instrument Approaches: The E-9A is a category "B" aircraft. If an approach will be flown at greater than 120 KIAS, use category "C" minimums. Prior to starting an instrument approach, pilots will confirm that their aircraft can comply with the MA climb gradient requirements established in AFMAN 11-202V3.

6.7. Post Flight/Miscellaneous.

6.7.1. Loading and Offloading of Personnel.

6.7.1.1. The loading/offloading of passengers and/or cargo through the aircrew entrance door is permitted. The AC will accomplish the appropriate checklist and will ensure the number one engine is shut-down and propeller has stopped rotating before allowing personnel and/or cargo to enplane or deplane the aircraft. An aircrew member or crew chief will be positioned at the air stair door to assist passengers and keep them clear of the aircraft's propeller arc (forward of the plane extending perpendicular to the fuselage from the rear of the air stair door).

6.7.1.2. The loading/offloading of passengers and/or cargo through the cargo door is permitted. The AC will accomplish the appropriate checklist and ensure the number one engine is placed in the START/FEATHER or DISC position before any personnel and/or cargo are loaded or offloaded.

6.7.2. X/C Procedures:

6.7.2.1. Review/Approval. All off-station training and X/C sorties that will remain overnight will be approved by the 82 ATRS Director of Operations IAW 53WEGI 11-250, *Airfield Operations*.

6.7.2.2. Enroute Reporting. Any enroute changes in itinerary must be coordinated and approved through the 82 ATRS Operations Supervisor and schedulers.

6.7.2.3. Refueling and Servicing. Ensure extra oil is onboard the aircraft. If maintenance personnel are unavailable, reference **Chapter 11** for aircrew servicing procedures.

6.7.3. Night Flying Operations. Night flying operations are authorized. Pilots must be current and qualified IAW Air Combat Command Manual (ACCMAN) 11-2E-9, Volume 1, *E-9—Aircrew Training*. If night flying operations must be conducted without a night flying current pilot, an IP must be at the controls (left or right seat) throughout the mission.

6.7.4. Cockpit Voice Recorder (CVR). If involved in a mishap or incident, after landing and terminating the emergency, pull the CVR power circuit breaker (if safety allows).

Chapter 7

AIRCREW SECURITY PROCEDURES.

7.1. General. This chapter provides guidance on aircraft security and preventing and resisting aircraft piracy (hijacking) of the E-9A aircraft. AFI 13-207-O, *Preventing and Resisting Aircraft Piracy (Hijacking) (FOUO)*, DAFI 31-101, *Base Defense Operations*, (this document has Restricted Access), and specific MAJCOM security publications contain additional guidance. Aircrews will not release information concerning hijacking attempts or identify armed aircrew members or missions to the public unless authorized by appropriate Air Force authorities or otherwise in accordance with law.

7.2. Security. The AC 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. Aircraft security at non-US military installations is the responsibility of the controlling agency.

7.2.1. Security personnel must be made aware of all visits to the aircraft. The security POC must be identified to the AC.

7.2.2. Securing. Secure the aircraft during a remain overnight (RON) on non-secure ramps with tampering tape placed on the crew entrance door and cargo door.

7.3. Arrival. On arrival, the AC will assess the local situation and ensure the aircraft and equipment are properly secured.

7.4. Entry Control Procedures. Unescorted entry is granted to aircrew members and support personnel assigned to the mission who possess their home station AF Form 1199, *Air Force Entry Control Card (Accountable)(Used with Advanced Automated Entry Control System)*, supported by an Entry Access List (EAL) or aircrew orders. Aircrew members are authorized escort authority.

Chapter 8

AIRCREW OPERATIONAL REPORTS AND FORMS

8.1. General. This chapter provides guidelines for worksheets, reports, and forms associated with E-9A operational activities. Consult governing instruction or contact wing, unit, or local flight safety officers for assistance with safety forms.

8.2. DAF Form 457, *Hazard Report.* The DAF Form 457 is a tool to notify supervisors and commanders of a hazardous condition that requires prompt corrective action. For hazardous weather, complete the front side of an DAF Form 457 and send it to the parent wing flying safety office. Ensure the parent unit receives it within 5 days of the event. Reports may also be submitted via the SAFEREP website at **https://saferep.safety.af.mil/** or the SAFEREP EFB app. For more information, see DAFI 91-202, *The Department of the Air Force (DAF) Mishap Prevention Program*.

8.3. AF Form 651, *Hazardous Air Traffic Report (HATR).* The AF Form 651 is a tool to report near midair collisions and alleged hazardous air traffic conditions. Reports may also be submitted via the SAFEREP website at **https://saferep.safety.af.mil/** or the SAFEREP EFB app. See paragraph 7.3.2 of DAFI 91-202 for more information concerning the HATR program.

8.3.1. DAFI 91-204, *Safety Investigations and Reports*, and DAFMAN 91-223, *Aviation Safety Investigations and Reports*, list HATR reportable incidents.

8.3.2. The AC shall report the hazardous condition to the nearest ATC agency (e.g., center, Flight Service Station (FSS), control tower, or aeronautical radio station) as quickly as safety allows. Include the following information in the radio call (as appropriate):

8.3.2.1. Aircraft identification or call sign.

8.3.2.2. Time and place (radial/Distance Measuring Equipment (DME) of Navigation Aid (NAVAID), position relative to the airfield, incident, etc.)

8.3.2.3. Altitude or FL.

8.3.2.4. Description of the other aircraft or vehicle.

8.3.2.5. Advise controlling ATC agency that the AC will file a HATR upon landing.

8.3.3. Deadline to file a HATR is 24 hours after event via any communication mode available. If landing airport has a USAF airfield management function, submit completed AF Form 651 to the airfield management officer for forwarding to wing safety office. If landing airport does not have an airfield management office, notify the safety office of the Air Force base nearest to location where the condition occurred; the AC's home base safety office; or as prescribed by overseas MAJCOM.

8.3.4. Information received in a HATR is not privileged and is not releasable outside of the Air Force. Information contained in these reports is intended for mishap prevention only and not intended for disciplinary actions.

8.4. Report Violations, Unusual Events, or Circumstances.

8.4.1. ACs shall document events that require them to deviate from AFMAN 11-202V3 (unless waived by appropriate authority) or alleged navigation errors (include over-water

position errors over 24NM, border, or ATC violations). Report to the Operations Supervisor and SQ/DO.

8.4.2. Describe deviation(s) using the following report format:

8.4.2.1. Facts. Report pertinent details of the event.

8.4.2.2. Investigation and analysis. Report circumstances which required/drove deviation(s).

8.4.2.3. Findings and conclusions.

8.4.2.4. Recommendations to prevent recurrence.

8.4.2.5. Corrective actions taken.

8.5. Unusual Events. ACs shall expeditiously report unusual events/circumstances that impact their mission to appropriate chain of command. Reportable events include, but are not limited to, spectrum interference, interception, fuel dumping, multiple engine failure, hostile fire, injury to passenger or aircrew member, etc.

8.6. Petroleum, Oil and Lubricants (POL) - Aviation Fuels Documentation. This section prescribes aviation POL (AVPOL) procedures that ensure correct documentation, form and invoice processing, and program supervision. Use the AIR Card for the purchase of aviation fuel and ancillary ground services at commercial airports (and some military installations) worldwide. The AIR Card is authorized for use by all US government aircraft, state, and local law enforcement aircraft, and some foreign government aircraft. In most cases, there will be no changes when refueling at non-Defense Energy Support Center (DESC) contract locations. The AIR card is accepted at approximately 4,800 locations worldwide. A list of all MSC-accepting merchants can be found at **https://www.aircardsys.com/**. It replaces the Standard Form (SF) 44, *U.S. Government Purchase Order-Invoice-Voucher* at locations that accept the AIR card.

8.6.1. Responsibilities. Aircrew and maintenance personnel will be familiar with AVPOL procedures and documentation requirements of this chapter. Improper use of the MSC card could create financial liability for the purchaser.

8.6.2. When planning out and back training lines, aircrew will stop at military fields or locations with Defense Logistics Agency fuel contracts. These can also be identified by using the “AIRCARD FBO Locator” App.

Chapter 9

TRAINING AND OPERATING LIMITATIONS

9.1. General. This chapter's purpose is to establish procedures for continuation training, simulated emergency procedure training, and area work training that may be accomplished to include: steep turns, traffic pattern stall series, alternate gear extension, and Vertical-S maneuvers.

9.2. Area Work. Military Operating Areas (MOA) for area work will be coordinated with unit scheduling. Area work maneuvers will be conducted in day VMC.

9.2.1. Steep Turns. Steep turns should be limited to 60 degrees of bank during level flight.

9.2.2. Traffic Pattern Stall Series.

9.2.2.1. Pre-Series Checks:

9.2.2.1.1. Accomplish traffic pattern stall series at an altitude between 5,000 feet AGL and 15,000 feet MSL. The crew will obtain an altitude block for accomplishing traffic pattern stalls. Accomplish the "Descent Checklist" and the "Before Landing Checklist."

9.2.2.1.2. Do not trim the aircraft at speeds below 100 KIAS.

9.2.2.2. Stall Series. Power settings to be used will be briefed prior to accomplishment.

9.2.2.3. Post-Stall Series Checks. Complete the "After Takeoff/Climb Checklist".

9.2.3. Alternate Gear Extension. Follow the procedures in TO 1E-9A-1 for alternate gear extension training.

9.2.4. Vertical-S. Fly Vertical-S maneuvers IAW AFMAN 11-202V3.

9.3. Practice and Simulated Emergencies. Practice/simulated emergencies will not be accomplished when there are passengers who are not on the AF Form 4327A, *Crew Flight (FA) Authorization* (**Exception:** MEP listed on the passenger manifest). Inform the crew of simulated EPs intentions and actions before commencing simulated EPs. Additionally, notify crew once simulated EP training is complete and/or terminated.

9.4. Single-Engine Simulation. The following procedures will be used when simulating an engine failure in flight.

9.4.1. PF will disengage the autopilot. Turn off synchrophase and set condition levers to maximum (1200 RPM). Retard the appropriate power lever to 15-20 percent torque.

9.4.2. Accomplish the appropriate checklist. **Note:** The gear warning horn circuit breaker system will not be disabled.

9.4.3. An IP with direct access to flight controls, is required to conduct simulated single-engine approaches, simulated single-engine MAs, simulated single-engine touchdowns to a two-engine (normal) go, and simulated single-engine full stop landings on dry runways. Weather must be 1000 feet and 2 statute miles or circling minimums, whichever is higher for simulated single-engine operations. This restriction does not preclude initiating simulated single engine training while in Instrument Meteorological Conditions (IMC) above 1000 feet and 2 statute miles or circling minimums, whichever is higher.

9.4.4. During a simulated single-engine approach, if an unplanned GA or MA is executed, both power levers will be used. Again, planned simulated single-engine MAs are permitted but will be thoroughly briefed prior to the MA.

9.4.5. Simulated loss of an engine immediately after takeoff is not authorized.

9.4.6. At no time will more than one of the aircraft's engines be simulated out. Simulated single-engine MAs will be initiated above 300 feet AGL to ensure that the aircraft will not descend below 300 feet AGL throughout the maneuver. If the aircraft descends below 300 feet AGL for a planned full stop or touch-and-go landing and a MA is necessary, the MA will be accomplished using both engines.

9.5. Practice Emergency Descents. Practice emergency descents will be completed clear of clouds and before reaching 5,000 feet AGL or the established Minimum Obstacle Clearance Altitude (MOCA), whichever is higher.

9.6. Touch-and-Go/Stop-and-Go Weather Minimums. Normal touch-and-go/stop-and-go landings will not be accomplished unless the actual weather conditions are at or above published approach minimums for the approach being flown (minimum 2,400 RVR feet) and useable runway length is at least 6,000 feet.

9.7. Practice No-Flap Landings. Practice no-flap landings will not be accomplished in the E-9A aircraft. **(T-3)**

9.8. Divert Instructions. Refer to 53 WEG/WSEP Pilot Aid for divert data.

9.9. Operating Limitations.

9.9.1. Unless specifically authorized elsewhere in this section, do not practice EPs that degrade aircraft performance or flight control capabilities (in-flight). In an actual emergency, terminate all training and flight maneuver practicing. Training should only be resumed when the AC determines it is safe.

9.9.2. Option Approach and Visual Low Approaches. Initiate a planned MA according to the limitations in **Table 9.1**.

9.9.3. Bank Angle. Normally limit bank angle to 45 degrees or the onset of the "BANK ANGLE" Enhanced Ground Proximity Warning System (EGPWS) advisory. In day VMC only, up to 60 degrees may be used for steep turns during area work and telemetry track reset turns.

Table 9.1. Training Flight Restrictions.

Maneuver	Altitude	Remarks
Actual engine shutdown	5,000 feet AGL (minimum)	Perform only for Functional Check Flight (FCF) (Actual or Training)
Instrument Missed/low approaches	MDA/DH	Initiate practice instrument MAs no lower than the minimum altitude for the type of approach executed.
Simulated engine failure, Simulated single engine MA or GA	Initiate at or above 300 feet AGL	For all unplanned GAs from simulated single-engine approaches and if single engine MA occurs below 300 feet AGL, use BOTH throttles during MA/GA maneuver
Planned VFR GAs with simulated emergencies ***other*** than engine out	Initiate no lower than 100 feet AGL	Practice balked landings may be initiated below 100 feet.
Any simulated emergency (except engine failure) On takeoff On landing	 Initiate above 1000 feet AGL Initiate above 1000 feet AGL	
Men and equipment on runway	Initiate above 500 feet AGL	

9.10. Instructor Pilot (IP) Briefing. Before all training/evaluation missions, instructors/flight examiners should brief their crew on the following items:

9.10.1. Training/Evaluation requirements. Instructors/evaluators (for each crew position) will outline requirements and objectives for each student or examinee.

9.10.2. Planned training area and airport considerations, if applicable.

9.10.3. Importance of both pilots to actively monitor the fuel balance.

9.10.4. Importance of maintaining at least minimum charted speeds for configuration.

9.10.5. Approach profiles, clearing procedures, and responsibilities.

9.10.6. Simulated scenarios and CRM.

9.10.7. Safety, aircrew discipline, and airmanship.

Chapter 10

FUEL PLANNING

10.1. General. This chapter provides general E-9A fuel planning considerations and procedures. Missions should be planned at altitudes, routes, and airspeeds to minimize fuel usage.

10.2. Fuel Requirements.

10.2.1. This paragraph implements standard minimum fuel requirements. Comply with AFMAN 11-202V3/AFMAN 11-202V3_ACCSUP and local guidance, if applicable.

10.2.2. Required ramp fuel will consist of all fuel required for engine start, taxi, takeoff, climb, cruise, alternate/MA (if required), descent, approach, transition, landing, and fuel reserve (holding fuel). Fuel planning will be done in ForeFlight® or another EFB program of record.

10.3. Alternate Fuel. Fuel for flight from intended destination to alternate aerodrome at optimum altitude and normal cruise speed. Compute fuel, time, and altitude from TO 1E-9A-1. **Note:** Plan initial arrival overhead destination with fuel for holding plus approach and landing or 800 pounds, whichever is greater. If destination has two operational and suitable runways for landing, plan initial arrival overhead destination with fuel for holding plus approach and landing or 600 pounds, whichever is greater. Additional fuel may be added to allow crews some flexibility when dealing with unplanned contingencies (e.g., weather avoidance, ATC delays.) When dealing with unplanned contingencies, crews will still plan to touchdown with fuel reserve (minimum). Unit may develop standard alternate fuel requirements for local training missions; however, these fuel requirements will not be less than those specified in this chapter (see **Table 10.1**.).

Table 10.1. Fuel Requirements.

Fuel Load Component	Requirement[4]
1. Start, taxi, takeoff	200 pounds
2. Enroute[1]	Fuel for planned climb and cruise to overhead destination at cruise altitude or initial approach fix altitude
3. Enroute reserve (off-station sortie)	Fuel for 10 percent of flight time over route segments at normal cruise
4. Alternate, required by **AFMAN11-202V3**	Fuel from overhead destination to the alternate at normal speed and altitude
	O
Alternate, based on VIS only criteria (see **AFMAN11-202V3**[2])	Fuel for descent, approach, and MA; use 200 pounds + fuel from destination to alternate using climb and normal cruise charts
5. Holding[3]	0+45 fuel using holding charts at 10,000 feet. When holding in lieu of alternate is required use 1+15 holding fuel computed at 20,000 feet. (IAW AFMAN11-202V3 ACCSUP)
6. Approach and landing	200 pounds
7. Known holding delays	Fuel for planned holding when delays are anticipated
Notes: (1) Include all planned off-course maneuvering for departure or enroute deviations. (2) When two alternates are required, compute fuel from the destination to the most distant alternate only. (3) Minimum fuel required over destination or alternate is fuel for holding plus approach and landing or 1,000 pounds, whichever is greater. (4) Compliance with this chart ensures fuel reserve requirements in AFMAN 11-202V3.	

10.4. Minimum Fuel. Minimum fuel is 400 pounds. Crews should plan to terminate all missions with not less than 400 pounds (when required holding is 1+15 crews should plan to land with approximately 800-1000 lbs). When operating in FAA airspace, pilots will declare minimum fuel to the controlling agency when in their judgment the aircraft may land at the intended destination with less than these amounts.

10.5. Emergency Fuel. Emergency fuel is 260 pounds. Crews will declare an emergency whenever it is determined that they will land with emergency fuel or less.

Chapter 11

AIRCREW MAINTENANCE SUPPORT PROCEDURES

11.1. General. This chapter contains aircrew procedures not contained in the flight manual, other portions of this manual, or other publications.

11.2. Responsibilities. Aircrew may assist the normal MX function when critical contingency tasking dictates their use, provided this action does not impact crew duty and crew rest limits specified in **Chapter 3** of this manual.

11.3. Authority to Clear a Red X. Pilots are not normally authorized to clear a Red X. If a situation is encountered where the aircraft is on a Red X and qualified MX personnel are not available to clear it, the AC may obtain authorization to clear the Red X from the owning Maintenance (MX) Program Manager or Operations Group Commander (OG/CC). Other crew members are not authorized to clear a Red X.

11.4. Aircraft Servicing. Aircrew are normally not required to service the aircraft; however, they are qualified and authorized to perform those aircrew maintenance support tasks found in this publication. The aircrew performs these tasks only in the absence of qualified MX personnel. This exception is designed for support of the aircraft and its mission while away from home station. Without exception, the applicable checklists will be used during all refueling and de-fueling operations.

11.4.1. Aircraft Refueling and Servicing. Aircrew members qualified in ground refueling may perform refueling duties. Aircrews will only refuel in cases when MX support is not readily available and the mission would be delayed.

11.4.1.1. When crewmembers are required to refuel, a pilot will act as the refueling team supervisor. Pilots acting as refueling supervisors and panel operators will comply with TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*, and applicable E-9A series TOs.

11.4.1.2. For X/C missions, check the engines oil level within 30 minutes of engine shutdown.

11.4.1.3. Concurrent Ground Operations. Concurrent servicing ground operations are not authorized.

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

11.4.2.1. Electric and electronic equipment may be left on provided it does not radiate energy; but it must not be turned on or off during refueling.

11.4.2.2. Tactical Air Navigations (TACANs) must be turned off.

11.4.2.3. Radar may be in standby but, if time permits, should be turned off.

11.4.2.4. Identification, Friend or Foe, (IFF) may be in standby but, if time permits, should be turned off.

11.4.2.5. FMS may be on and may be updated. Do not turn on or off during refuel operations.

11.4.2.6. A ground power unit (GPU) may be used to supply aircraft electrical power.

11.4.3. Fire Protection and Crash Rescue. A fire bottle, if available, should be positioned near the front of the aircraft prior to starting engines.

11.4.4. Aircrew and MX Engine Runs.

11.4.4.1. A mixture of aircrew and MX personnel will not normally accomplish engine runs. When an aircrew member is required to start or run up engines for MX purposes, the following procedures apply:

11.4.4.2. Coordinate engine run with scheduling and engine run objectives with MX.

11.4.4.3. Accomplish aircraft interior and exterior checklists, engine start and before taxi, taxi (if required), and engine shutdown checklists.

11.4.4.4. If taxi is required, coordinate with ground controllers or tower controllers as appropriate.

11.4.4.5. MX personnel will accomplish all necessary inspections and preparations for the engine run. These actions include but are not limited to: intake/exhaust inspections, access panel security servicing, and AFTO Form 781 documentation.

11.5. Aircraft Recovery Away from Main Operating Base (MOB). The AC is responsible for ensuring the aircraft is turned to meet subsequent mission taskings. If qualified MX specialists are unavailable, the aircrew is responsible for turning the aircraft to meet subsequent mission taskings.

11.5.1. The AC is responsible for the recovery items including:

11.5.1.1. Taxi, parking and mission tasking coordination with C2.

11.5.1.2. Aircraft servicing, including Aircraft Ground Equipment (AGE) usage.

11.5.1.3. Supervision of minor maintenance within local capability.

11.5.1.4. Minor configuration changes to meet mission tasking.

11.5.1.5. Securing the aircraft before entering crew rest.

11.5.1.6. Coordinating aircraft security requirements.

11.5.1.7. Documenting AFTO 781-series forms.

11.5.2. In all cases where aircrews must service the aircraft without qualified MX specialist assistance, comply with the appropriate MX TO.

11.5.3. Aircrews are not qualified to accomplish the required ground inspections. In those instances where maintenance personnel are not available, the aircrew will enter a red dash symbol in the AFTO Form 781H updating current status and enter a red dash symbol and a discrepancy that reflects that the applicable maintenance inspection (e.g., preflight, thru-flight, basic post-flight) is overdue.

Chapter 12

CARGO AND PASSENGER PROCEDURES

12.1. General. A pilot coordinates passenger and cargo loading with C2 agency and/or unit schedulers.

12.2. Responsibilities for Aircraft Passenger Loading. A passenger manifest will be provided to the AC to verify passengers on board for mission. The AC or a designated representative qualified in egress procedures training will brief passengers on emergency actions and other pertinent passenger information. See **Attachment 2** for Passenger Briefing Guide.

12.3. Responsibilities for Aircraft Cargo Loading. The pilot is responsible for aircraft preflight, load planning (as required) of all cargo, preparing takeoff and landing data, weight and balance criteria, properly operating aircraft equipment, tiedown of cargo, and checking the cargo against manifests. The pilot supervises and directs on/offloading and is responsible for safe movement of cargo into and out of the aircraft.

12.4. Emergency Exits and Safety Aisles. No part of the cargo load will extend into the aisle, so as not to obstruct the aisle in case of evacuation.

BRIAN S. LAIDLAW, Major General, USAF
Director of Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

53WEGI 11-250, *Airfield Operations*, 25 September 2025

ACCI 11-270, *Operations Mobile Devices (OMDS)*, 6 November 2024

ACCMAN 11-2E-9V1, *E-9—Aircrew Training*, 26 February 2025

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DAFI 91-204, *Safety Investigations and Reports*, 10 March 2021

DAFMAN 11-401, *Aviation Management*, 27 October 2020

DAFMAN 11-401_ACCSUP, *Aviation Management*, 30 July 2021

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DAFMAN 91-223, *Aviation Safety Investigations and Reports*, 20 September 2022

DoD 5400.11-R, *Department of Defense Privacy Program*, 14 May 2007

DoDI 7730.67, *Aviation Incentive Pays and Bonus Program*, 20 October 2016

EO 9397, *Numbering System for Federal Accounts Relating to Individual Persons*, 22 November 1943

TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*, 12 July 2023

TO 1E-9A-1, *Flight Manual USAF Series E-9A Aircraft*, 15 February 2026

TO 1E-9A-1CL-1, *Pilot's Abbreviated Flight Crew Checklist USAF Series E-9A Aircraft*, 15 February 2026

TO 1E-9A-1CL-1-1, *Pilot's Fanfold Checklist*, 15 February 2026

TO 1E-9A-1CL-11-WA-1, *Pilot's Abbreviated Flight Crew Checklist, USAF Series E-9A Aircraft*, 15 February 2026

Prescribed Forms

None

Adopted Forms

AF Form 1199, *Air Force Entry Control Card (Accountable)(Used with Advanced Automated Entry Control System)*

AF Form 4327A, *Crew Flight (FA) Authorization*

DAF Form 457, *Hazard Report*

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

AF Form 8, *Certificate of Aircrew Qualification*

AF Form 70, *Pilot's Flight Plan and Flight Log*

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

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

AFTO Form 781H, *Aerospace Vehicle Flight Status and Maintenance*

DAF Form 847, *Recommendation for Change of Product*

DD Form 1801, *DoD International Flight Plan*

DD Form 1896, *DoD Fuel Identaplate*

DD Form 365-4, *Weight and Balance Clearance Form F - Transport/Tactical*

SF 44, *U.S. Government Purchase Order-Invoice-Voucher*

Abbreviations and Acronyms

AC—Aircraft Commander

ACC—Air Combat Command

ACCMAN—Air Combat Command Manual

ADS-B—Automatic Dependent Surveillance – Broadcast

ADS-C—Automatic Dependent Surveillance – Contract

AFI—Air Force Instruction

AFTO—Air Force Technical Order

AGE—Aircraft Ground Equipment

AGL—Above Ground Level

APCH—Approach (specific to RNAV APCH only)

AR—Authorization Required

ARMS—Aviation Resource Management System

ARTCC—Air Route Traffic Control Center

ASAP—Aviation Safety Action Program

ASRR—Airfield Suitability and Restrictions Report

ATC—Air Traffic Control

ATM—Air Traffic Management

ATOS—Servicing Of Aircraft And Static Grounding/Bonding

AVPOL—Aviation Petroleum, Oil and Lubricants

BMC—Basic Mission Capable

BOI—Boat of Interest

B-RNAV—Basic Area Navigation

C2—Command and Control

CRM—Cockpit/Crew Resource Management

CVR—Cockpit Voice Recorder

DAFI—Department of the Air Force Instruction

DAFMAN—Department of the Air Force Manual

DESC—Defense Energy Support Center

DH—Decision Height

DME—Distance Measuring Equipment

DoD—Department of Defense

DoDI—Department of Defense Instruction

DT&E—Developmental Test & Evaluation

EAL—Entry Access List

EFB—Electronic Flight Bag

EGPWS—Enhanced Ground Proximity Warning System

EO—Executive Order

EP—Evaluator Pilot

EPs—Emergency Procedures

FAA—Federal Aviation Administration

FAF—Final Approach Fix

FA—Flight Authorization

FBO—Fixed-Base Operator

FCF—Functional Check Flight

FCIF—Flight Crew Information File

FDP—Flight Duty Period

FIH—Flight Information Handbook

FL—Flight Level

FLIP—Flight Information Publication

FMC—Fully Mission Capable

FM—Frequency Modulation

FMS—Flight Management System

FSS—Flight Service Station

GA—Go-Around

GPS—Global Positioning System

GPU—Ground Power Unit

HAA—Height Above Airport

HAT—Height Above Touchdown

HATR—Hazardous Air Traffic Report

IAW—In Accordance With

ICAO—International Civil Aviation Organization

IFF—Identification, Friend or Foe

ILS—Instrument Landing System

IMC—Instrument Meteorological Conditions

IP—Instructor Pilot

KIAS—Knots Indicated Airspeed

LNAV—Lateral Navigation

LOS—Line of Sight

LP—Localizer Performance

LPV—Localizer Performance with Vertical Guidance

MAJCOM—Major Command

MA—Missed Approach

MDA—Minimum Descent Altitude

MDS—Mission Design Series

MEL—Minimum Equipment List

MEP—Mission Essential Personnel

MESL—Minimum Essential Subsystem List

MMEL—Master Minimum Equipment List

MNPS—Minimum Navigation Performance Standards

MOA—Military Operating Area

MOB—Main Operating Base

MOCA—Minimum Obstacle Clearance Altitude

MSC—Multi Service Corporation

MSL—Mean Sea Level

MSO—Mission Systems Operator

MX—Maintenance

NAS—National Airspace System

NAVAID—Navigation Aid

NLT—No Later Than

NM—Nautical Miles

NOTAMS—Notices to Airmen

OG/CC—Operations Group Commander

OPREP—Operations Report

ORM—Operational Risk Management

OSI—Office of Special Investigation

OT&E—Operational Test & Evaluation (OT&E)

PEX—Patriot Excalibur

PF—Pilot Flying

PL—Public Law

PNF—Pilot Not Flying

POL—Petroleum, Oil and Lubricants

RA—Resolution Advisory

RCR—Runway Condition Reading

RESCAP—Rescue Combat Air Patrol

RF—Radius-to-Fix

RNAV—Area Navigation

RNP—Required Navigation Performance

RON—Remain Overnight

RPM—Revolutions Per Minute

RSO—Range Safety Officer

RVR—Runway Visual Range

RVSM—Reduced Vertical Separation Minimum

SAAAR—Special Aircraft and Aircrew Authorization Required

SAFEREP—Safety Reporting

SID—Standard Instrument Departures

SITCO—Shell International Trading Company

SM—Statute Miles

SQ/CC—Squadron Commander

SQ/DO—Squadron Director of Operations

SSR—Sea Surveillance Radar

STAR—Standard Terminal Arrival Route

TACAN—Tactical Air Navigation

TCAS—Traffic Collision Avoidance System

TOLD—Takeoff and Landing Data

TO—Technical Order

UHF—Ultra High Frequency

USAF—United States Air Force

USC—United States Code

US—United States

V1—Takeoff decision speed

V2—Takeoff Safety Speed

VAPP—1.23 Reference Stall Speed and Wind/Gust Factor

VFR—Visual Flight Rules

VGA—Go Around Speed

VMC—Visual Meteorological Conditions

VNAV—Vertical Navigation

VREF—Approach speed at a height of 50 feet above the runway in the landing configuration

VSE—Safe, intentional one engine inoperative speed

VS—Stall Speed

WEG—Weapons Evaluation Group

WSEP—Weapon System Evaluation Program

X/C—Cross-Country

Office Symbols

53 WEG/CC—53d Weapons Evaluation Group Commander

53 WEG/OGV—53d Weapons Evaluation Group Standardization and Evaluation

82 ATRS/CC—82d Aerial Targets Squadron Commander

ACC/A3—Air Combat Command Director of Operations

ACC/A3TV—Air Combat Command Standardization and Evaluation Branch

Attachment 2

BRIEFING GUIDES

A2.1. GENERAL BRIEFING GUIDE.

A2.1.1. MISSION DATA:

A2.1.1.1. Mission Objective

A2.1.1.2. Flight Authorization/Flight Orders/ORM

A2.1.1.3. Time Hack/Date

A2.1.1.4. Mission number

A2.1.1.5. Airspace

A2.1.1.6. Range Time

A2.1.1.7. Start Time

A2.1.1.8. Takeoff time

A2.1.1.9. Departure

A2.1.1.10. Drone takeoff

A2.1.1.11. Aircraft tail number and call sign

A2.1.1.12. Takeoff Weight

A2.1.1.13. Takeoff Torque

A2.1.1.14. Maximum Torque allowed

A2.1.1.15. Takeoff Roll Distance

A2.1.1.16. V1, V2, VSE, VAPP, Vref, VGA

A2.1.1.17. Current and forecast weather

A2.1.1.18. Alternate or Take-off alternate required?

A2.1.1.19. NOTAMS

A2.1.1.20. Personnel Equipment

A2.1.1.21. PEX/FCIF

A2.1.1.22. Publications/Charts

A2.1.2. Mission Specifics:

A2.1.2.1. Brief preflight duties

A2.1.2.2. Brief engine start and taxi procedures

A2.1.2.2.1. Normal procedures

A2.1.2.2.2. “What if” emergencies

A2.1.2.3. Brief takeoff procedures

A2.1.2.4. Brief normal flight beginning at level off to include:

A2.1.2.4.1. Level off altitude and final SID procedures (brief DD Form 1801 if filed)

A2.1.2.4.2. Range Patrol procedures

A2.1.2.4.3. Communications Plan

A2.1.2.4.4. Telemetry Procedures

A2.1.2.4.5. TM/Relay Frequencies

A2.1.2.4.6. Recovery Procedures

A2.1.2.4.7. Traffic pattern work

A2.1.2.4.8. Debrief time

A2.1.3. Other Topics:

A2.1.3.1. Alternate Mission

A2.1.3.2. Abnormal/Emergency Procedures (EPs)

A2.1.3.2.1. Aborts

A2.1.3.2.2. Landing Immediately After Takeoff

A2.1.3.2.3. RESCAP

A2.1.3.2.4. Emergency/Alternate Airfields

A2.1.3.2.5. EPs of the Day

A2.1.4. Special Subjects:

A2.1.4.1. Crew Coordination

A2.1.4.1.1. Time crunches for each crew member

A2.1.4.1.2. Task saturation for each crew member

A2.1.4.1.3. Prioritization

A2.1.4.1.4. Situational Awareness

A2.1.4.1.5. Interphone procedures

A2.1.4.2. Special Interest Items

A2.2. PASSENGER/ORIENTATION BRIEFING GUIDE.

A2.2.1. Location and Use of Emergency Exits

A2.2.2. No Smoking/Seat Belt Signs/Use of Seat Belts

A2.2.3. Emergency Depressurization/Use of Oxygen

A2.2.4. Location/Use of Life Rafts/Ditching Procedures

A2.2.5. Use of Electronic Equipment in Flight

A2.2.6. Use of Lavatory

A2.2.7. Communications Procedures

A2.3. MISSION DEBRIEFING GUIDE.

A2.3.1. Ground Procedures

A2.3.2. Takeoff/Departure

A2.3.3. Enroute Procedures

A2.3.4. Recovery/Landing

A2.3.5. General

A2.3.5.1. Radio Procedures

A2.3.5.2. Crew Coordination

A2.3.6. Mission Accomplishment/Analysis

A2.3.6.1. Mission Reconstruction

A2.3.6.2. Mission Support

A2.3.6.3. Objectives Achieved

A2.3.6.4. Lessons Learned

A2.3.6.5. Recommendations for Improvement

A2.3.7. Comments/Questions