FEDERAL AGENCY AIRCRAFT OPERATIONS MANUAL GUIDE

Prepared for
INTERAGENCY COMMITTEE
FOR
AVIATION POLICY

JULY 10, 1992

<Your Agency
FEDERAL AGENCY AIRCRAFT OPERATIONS MANUAL GUIDE
RECORD OF CHANGES

CHANGE NUMBER	DATE INSERTED	INITIALS	CHANGE NUMBER	DATE INSERTED	INITIALS

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FLIGHT OPERATION STANDARDS

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1. GENERAL

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2. (NAME) FLIGHT PROGRAM OPERATIONS MANUAL

A. PURPOSE OF THE MANUAL

(1) This manual is not intended to be directive in nature. The directive style of the language in the manual is provided as an example of a style that agencies may wish to adopt in their individual manuals.

(2) The manual provides a guide to the preferred format for an agency aircraft operations manual. Each agency manual should contain at least the same chapters as in this manual, unless the chapters are not applicable to specific agency requirements. To promote the standardization of operations manuals among the various agencies, it is suggested that agencies use the same section and paragraph numbering format as in this manual.

(3) It is expected that agencies will provide additional inserts throughout the manual as required to recognize unique agency needs. Sections have been reserved at the end of each chapter to provide for these needs.

B. RESPONSIBILITIES

(1) Suggest the Controlling Authority of the Manual be cited.

(2) Any waivers to the requirements of this manual or to agency supplements should be directed to the agency manager of flight operations. He has the sole authority to waive these requirements. Copies of waivers should be included as amendments to this manual or filed in a manner specified by the agency manager of flight operations.

(3) Revisions to the manual should be made as required by regulatory changes or agency needs. The manual should contain a document control sheet for revisions. Each revision should be numbered and dated.

Revised pages shall be placed in the appropriate sections of the manual; the pages replaced by the revision should be discarded. All revision pages shall bear an effective data and revision number.

C. INFORMATION DEFICIENCY

(1) Suggest a statement be included changing each manual user with responsibility to submit suggested changes.

(2) Suggest changes to be forwarded through the users supervision.

D. IMPLEMENTATION

(1) Suggest a statement be made regarding the initial review period and the established implementation date.

(2) Suggest an organization be cited to control quarterly reviews and alteration of the manual.

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CHAPTER I. INTRODUCTION

3. REVISION SYSTEM

A. PURPOSE

(1) Suggest a statement be made that the manual must be updated and changed as conditions change.

(2) Suggest that all users must have latest infromation.

B. RESPONSIBILITIES

(1) Suggest the routing of changes be listed.

(2) Suggest the printing method be cited.

C. CHANGES

(1) Suggest the CHANGE TYPES be defined.

(2) Suggest that time frame for change types be established.

D. LIST OF EFFECTIVE PAGES

(1) Suggest the list be explained.

(2) Suggest use of the list.

E. SUPPLEMENTS

(1) Suggest supplements be defined.

(2) Suggest supplement changes be defined.

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CHAPTER II. MANAGEMENT

1. TABLE OF ORGANIZATION

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CHAPTER II. MANAGEMENT

2. MANAGEMENT QUALIFICATIONS AND DUTIES

A. MANAGER OF FLIGHT OPERATIONS

(1) Qualifications

The position of agency manager of flight operations shall be staffed by a person who:

(a) Holds an airline transport pilot certificate or equivalent;

(b) Has at least three years experience as pilot in command of an agency aircraft; and

(c) Has at least three years supervisory or managerial experience in aircraft operations.

(2) Duties

(a) The agency manager of flight operations will have the final authority over all agency flight operations and maintenance functions.

(b) Suggest the manager appoints or approves lower level positions.

(c) Suggest the manager has control over the Flight Program funding.

(d) Suggest the manager has control over accident/incident investigation and other emergency occurrences.

(e) Suggest the manager reports to (Agency Head).

(f) Suggest the manager approve all changes to the Flight Operations Manual.

CHAPTER II. MANAGEMENT

SUGGESTED TOPICS

(3) Acting and Signature Authority

(a) Acting when Manager is absent.

1 Unit Director of Operation
2 Chief of Maintenance

(b) Signature when Manager is absent.

1 Unit Director of Operations
2 Chief Pilot

B. UNIT DIRECTOR OF OPERATIONS

(1) Qualifications

The position of director of operations will be staffed by a person who:

(a) Holds an airline transport pilot certificate or equivalent;

(b) Is a current pilot in command with at least three years experience as a pilot in command of agency aircraft; and

(c) Has at least three years of supervisory or managerial experience.

(2) Duties

(a) The unit Program Manager and or director of operations has the oversight responsibility for the unit's daily operations will provide oversight and direction to the chief of safety, chief of scheduling and flight following, chief of maintenance, and the chief pilot.

The unit director of operations shall establish recordkeeping procedures for all required personnel training and have flight release authority over all unit aviation assets. The unit director of operations will report directly to the agency manager of flight operations.

(b) Suggest the Unit Director approves all flight crewmember and maintenance personnel.

(c) Suggest the Unit Director appoints:

1 Chief of Safety
2 Chief of Scheduling and Flight Following
3 Chief Pilot
4 Chief of Maintenance

C. CHIEF OF SAFETY

(1) Qualifications

he position of chief of safety shall be staffed by a pilot who is qualified to at least act as pilot in command. This person must have the additional approved specialized training in accident/incident investigation, hazard identification, and safety program development. The chief of safety shall establish a safety program and advise the unit director of operations on all safety matters pertaining to the unit operation.

(2) Duties

(a) The person in this position shall function as the unit accident investigation specialist and shall report directly to the agency manager of flight operations.

(b) Suggest the Chief develop safety training programs for all operations and maintenance personnel.

(c) Suggest the chief act as key person for the elimination of all safety hazards.

D. CHIEF PILOT

(1) Qualifications

The position of chief pilot shall be staffed by a person who:

(a) Holds an CFI pilot certificate with appropriate ratings for at least one of the types of aircraft to be used in the operations, or equivalent qualifications;

(b) Has at least three years of experience as a pilot in command of an agency aircraft; and

(c) Is a current pilot in command.

(2) Duties

(a) The chief pilot shall be responsible for direct oversight over all unit check airmen, flight crewmembers, and cabin attendants and other crewmembers. This person shall be responsible for monitoring the completion of required training and ensuring adherence to all agency standards and operating rules. The chief pilot shall be directly responsible to the unit director of operations.

(b) Suggest the chief pilot designates the Pilot in Command.

(c) Suggest the chief pilot approves all flight missions and assigned personnel.

(d) Suggest the chief pilot the assignment of check airmen for each required check.

E. CHIEF OF SCHEDULING AND FLIGHT FOLLOWING

(1) Qualifications

The chief of scheduling and flight following shall be specifically trained for the responsibility of scheduling the unit missions and ensuring they are flight followed in accordance with Chapter 3.0 of this manual. This person shall report to the unit director of operations.

(2) Duties

(a) Suggest the chief develops and posts schedules

(b) Suggest the chief consider these factors

1 Crewmember duty limits
2 Crewmember training and qualifications
3 Maintenance schedules

(c) Suggest the chief maintain contact with all flights for flight following.

(d) Suggest the chief take immediate action in event of a missing aircraft.

F. CHIEF OF MAINTENANCE

(1) Qualifications

The position of chief of maintenance shall be staffed by a person who:

(a) Holds an FAA airframe and powerplant certificate or equivalent;

(b) Has at least three years of maintenance experience with aircraft similar in type to those operated by the agency; and

(c) Has at least three years of supervisory or managerial experience.

(2) Duties

(a) The chief of maintenance is directly responsible to the unit director of operations. This position is not required if aircraft maintenance is performed by a contracted facility. In this case, it is strongly recommended that a liaison be established between the agency and the maintenance contractor.

(b) Suggest the chief approve all maintenance actions

(c) Suggest the chief supervise all maintenance records

CHAPTER II. MANAGEMENT

3. AGENCY SPECIFIC INFORMATION

A. (SPECIFIC POSITION)

(1) Qualifications

(2) Duties

B. (SPECIFIC POSITION)

(1) Qualifications

(2) Duties

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CHAPTER III. PERSONNEL POLICIES AND PROCEDURES

(SUGGESTED TOPICS)

1. GENERAL

A. PERSONAL HEALTH AND LIMITATIONS

(1) Illness or in capacitation

Crewmembers who become seriously ill, incapacitated, or hospitalized for any mental or physical disorder should advise the chief pilot. The crewmember must also consult with an aviation medical examiner or appropriate agency medical personnel before being reassigned to flight duties.

(2) Food and Eating

(a) Suggest flight crewmembers do not eat same foods because of possible food poison.

(b) Suggest flight crewmembers do not eat on the flight deck during critical phases of flight.

B. SMOKING POLICY

(1) Suggest smoking is not allowed on the flight check.

(2) Suggest passenger smoking be tightly controlled or not allowed.

CHAPTER III. PERSONNEL POLICIES AND PROCEDURES

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CHAPTER III. PERSONNEL POLICIES AND PROCEDURES

(SUGGESTED TOPICS)
2. FLIGHT RESTRICTIONS

A. RESTRICTIONS AFTER USE OF DRUGS

(1) No crewmember will possess, use, or distribute any medication or drug which is designated an illegal or controlled, dangerous substance under Federal or State law, except as may be authorized by law.

(2) No flight crewmember will be allowed to take medication within 24 hours before a flight other than a normal dosage of aspirin or related compounds.

(3) Unless prescribed or approved by an agency or FAA designated medical examiner or by an Armed Forces flight surgeon, use of medication by a crewmember must be discontinued at least 24 hours before reporting for flight duty.

(2) If continuing medication is necessary for a long-term disease, flight duty will be prohibited unless the Federal air surgeon of the FAA specifically approves that medication at the time of issuance of a medical certificate.

(5) Suggest statement of release by Flight Surgeon.

B. RESTRICTIONS AFTER USE OF ALCOHOL

(1) No person may act as a crewmember while under the influence of alcohol. Additionally, no crewmember will consume any alcoholic beverage while on duty or during the 8-hour period prior to reporting for duty.

(2) Suggest increased time limit for high altitude flight.

(3) Suggest crewmembers apparently acting as if under the influence of alcohol be denied crewmember duty.

CHAPTER III. PERSONNEL POLICIES AND PROCEDURES

C. RESTRICTIONS AFTER BLOOD DONATION

(1) Suggest blood donation time limits be included

(2) Suggest emergency blood donations require hemoglobin check by FAA Flight Surgeon before flight duty.

(3) Suggest a discussion of the possible results of recent blood donation during high altitude flight.

D. RESTRICTIONS AFTER DIVES OR CHAMBER RUNS

(1) Suggest scuba diving time limits be included.

(2) Suggest altitude chamber, low pressure run time limits be included.

CHAPTER III. PERSONNEL POLICIES AND PROCEDURES

(SUGGESTED TOPICS)
3. FLIGHTCREW RULES

A. ACCESS TO PILOT COMPARTMENT

(1) Suggest FAA Inspectors be allowed access to conduct flight checks. Inspector must show credentials.

(2) Suggest Officials of the Agency be permitted access under specific rules and at non-critical times.

(3) Suggest Passenger access be allowed only under very strict circumstances and rules

(4) Suggest statement be made regarding PIC authority to prohibit access to the flight check in an emergency.

B. CREWMEMBER APPEARANCE & CONDUCT

(1) Suggest Appearance must be professional and neat to reflect the status of a Federal Employee

(2) Suggest Personal conduct toward the public, contractors, and other Federal Agencies be polite and helpful.

(3) Suggest uniforms (if required) be clean, and presentable.

(4) Suggest beads not be worn by crewmembers in the event of the need to use an oxygen mask

(5) Suggest a statement address a crewmember's refusal to fly.

(6) Suggest Non-agency flying be reported properly and that records be made to the total of flightcrew activity.

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CHAPTER IV. CREWMEMBER QUALIFICATIONS AND DUTIES

1. FLIGHT CREWMEMBERS

A. PILOT IN COMMAND (PIC)

(1) Qualifications

(a) General

The pilot in command of an aircraft is the person designated by the chief pilot to be responsible for the safe operation of the aircraft. The pilot in command shall be trained or certificated in accordance with Appendix B of this manual. This person is responsible for all assigned crewmembers and is the final authority for the operation of the aircraft. The pilot in command is also responsible for the safety of all passengers and cargo. The pilot in command shall report directly to the unit chief pilot.

(b) Certification

1 Suggest the PIC be required to possess an Airline Transport Certificate and Type Rating.

2 Suggest the PIC possess a 1st Class Medical Certificate Radio Telephone Permit and (if necessary) a Crewmember Certificate.

(c) Training

1 Suggest PIC training be referred to Appendix B and a separate Training Document.

(d) Proficiency and Recent Experience

1 Suggest the following.

The Agency shall not use, nor shall any PIC or SIC serve as a flight crewmember unless that person has:

a Flight Hours/Flight Check
During the 180 days preceding the scheduled flight, must have accumulated 24 hours as PIC, SIC, instructor pilot (IP), check airman or any combination thereof, in any class or type aircraft. If not, one must comply with the requirements of or, as listed below:

i completed an agency approved formal flight training course which requires manipulation of the controls and culminates in a satisfactory check flight.

ii completed an appropriate re-qualification flight which culminates in a satisfactory check flight.

2 Recent Experience

Takeoff and Landings for Passenger Carrying Operations

Within the preceding 90 days, as sole manipulator of the controls, accomplished:

a Daylight - three takeoffs and landings in an aircraft of the same category, class and type, (if a type rating is required). Full stop landings are required for currency in a tail wheel aircraft.

b Nighttime - during the period beginning 1 hour after sunset and ending 1 hour before sunrise(as published in the Air Almanac), three takeoffs and landings to a full stop in an aircraft of the same category, class and type, (if a type rating is required).

(2) Duties and Responsibilities

Suggest a list similar to the following

(a) Comply with all current operational directives and policy guidance that governs job performance and participation in the Agency flight program as a PIC.

(b) Report to the office the Chief Pilot.

(c) Be recommended by the Chief Pilot.

(d) Be responsible for preflight, inflight, and post flight planning duties.

(e) During all operations, be responsible for compliance with the FOM, POH, FARs, and an approved written checklist.

(f) During flight time, be in command of the aircraft and crew, and responsible for the safety of the crew members, passengers, cargo and the aircraft.

(g) Have full control and authority in the operation of the aircraft, without limitations, over other crew members and their duties during flight time. This includes operational aspects and standards of operation and conduct established by the Agency.

(h) Ensure the aircraft is not operated in a careless or reckless manner, so as to endanger life or property.

(i) Assist the Chief Pilot in monitoring and furthering the progress of assigned SIC's.

(j) Maintain current knowledge of those general subjects, aircraft-related information and flight inspection mission policies and procedures which will enhance overall competency, ability and professionalism, and apply that knowledge to the job.

(k) Ensure expeditious completion of the Agency mission.

(l) Before the beginning of a flight, become familiar with all available information concerning that flight.

(m) Prior to departure, brief the SIC, and FE if applicable, on normal and emergency procedures.

(n) Have the authority to delegate duties as necessary. However, such delegation does not relieve the PIC of the overall responsibilities.

(o) Not permit any non-essential activity during a critical phase of flight which could distract or interfere with any flight which could distract or interfere with any flight crewmember in the performance of their duties.

(p) Ensure that no person is allowed to manipulate the flight controls of an aircraft during the flight unless that person is a pilot employed by the Agency and qualified in the aircraft. Pre-hire checks exempted.

(q) Ensure the Aircraft Flight Log is completed properly and annotated in a timely manner.

B. SECOND IN COMMAND (SIC)

(1) Qualifications

(a) Designation:

The second in command of an aircraft is a pilot who has been designated by the chief pilot as second in command for any aircraft in which a second in command is required by aircraft type certification. The second in command is responsible to the pilot in command for the safe operation of the aircraft and must be properly trained or certificated in accordance with Appendix B of this manual. The second in command shall report directly to the unit chief pilot.

(b) Training

Suggest SIC Training be referred to Appendix B and a separate Training document.

(c) Certificates

Suggest SIC Certification be stated similar to that of the PIC

(2) SIC Duties

Suggest a list similar to the following

(a) Assist or relieve the PIC in manipulation of the flight controls of an aircraft while underway, including taxiing, take-off and landing of the aircraft.

(b) Comply with all current operational directives and policy guidance that govern job performance and participation in the Agency flight program as a SIC.

(c) During all operations, be responsible for compliance with POH, FARs as appropriate to the SIC duties.

(d) Report and be accountable to the PIC for all aspects of a given mission.

(e) Ensure measures are taken to assist the PIC for the successful completion of the flight and mission, to include, but not limited to: weather review, advance coordination, communications adequacy and operation of airborne flight inspection equipment.

(f) Oversee the accomplishment of all services and activities relative to the aircraft and its operation to include, but not limited to: preflight, and post-flight, refueling records and the recording of other flight data. (This paragraph does not apply to operations requiring a flight engineer.)

(g) Assist the PIC in the details of conducting the airborne accomplishment of the mission with respect to the resources required, crew preparation, flight clearances etc.

C. FLIGHT ENGINEER

(1) Qualifications

Suggest the following:

(a) FAA Flight Engineer Certificate

(b) Turbojet, Turboprop, Reciprocating Engine Rating as appropriate

(c) Second Class Medical Certificate

(d) Training appropriate to the aircraft type

(e) Designation by Chief Pilot

(2) Duties

Suggest a list similar to the following:

(a) Comply with all current operational directives and policy guidance that governs job performance and participation in the Agency flight program as a flight engineer.

(b) Supervise and/or participate in aircraft fueling.

(c) Operate, monitor and analyze electrical, hydraulic, fuel, pressurization, power plant and other related systems.

(d) Monitor and analyze malfunctions and initiate immediate corrective action as stated in the FAA approved emergency checklist.

(e) Compute, provide and verify aircraft performance data on aircraft safety speeds, runaway length requirements, power settings, fuel consumption and weight and balance.

(f) Verify that all systems and maintenance work complies with airworthiness standards, specifications and procedures.

(g) Participate in test flights for maintenance repair, modifications and system evaluation to verify the airworthiness in accordance with FARs and safety standards. Describing, evaluating and reviewing discrepancies recovery and corrective actions accomplished.

(h) Report to and be accountable to the PIC for all flight engineer aspects of a given mission.

(i) Develop and submit reports associated with performance malfunctions and accidents, such as aeronautical reliability reports etc., suggesting and recommending changes to maintenance or flight operation procedures.

(j) Brief and demonstrate survival equipment, emergency evacuation and safety items to passengers on board the aircraft as directed.

(k) Maintain current knowledge of flight and maintenance operation procedures, safety regulations, FARs and Airworthiness Directives.

D. CHECK AIRMAN/INSTRUCTOR

(1) Qualifications

(a) A check airman shall be properly certificated and/or trained as a pilot or engineer in a specific aircraft. Check airmen shall be identified by the chief pilot to

perform either instructor or evaluator functions to other flight crewmembers in a specific crew position, i.e. pilots, flight engineers, and flight navigators. All check airmen shall report directly to the unit chief pilot.

(b) Suggest a check airman/instructor possess appropriate FAA Airman Certificates including Instructor Rating

(c) Suggest a check airman/instructor be chosen from the most experienced flight crewmembers.

(2) Duties

(a) Suggest the check airman be appointed by the Chief Pilot to perform all flight or ground checks

(b) Suggest the check airman/instructor be assigned by the Chief Pilot to conduct flight crewmember training.

CHAPTER IV. CREWMEMBER QUALIFICATIONS AND DUTIES

2. OTHER CREWMEMBERS

A. CABIN ATTENDANTS

(1) Qualifications

(a) Cabin attendants shall be designated by the chief pilot and properly trained in the carriage of passengers and emergency duties. They are responsible to the pilot in command for the safe operation of the aircraft. All cabin attendants shall report directly to the unit chief pilot.

(b) Suggest a summary of required training

(c) Suggest a statement of trial employment as crewmember.

(2) Duties

(a) Suggest a list of duties during normal flight

(b) Suggest a list of duties during emergencies

B. FLIGHT MECHANIC

(1) Qualifications

(a) Suggest a summary of required training

(b) Suggest a statement of trial employment as crewmember.

(2) Duties

(a) Suggest a list of duties during normal flight

(b) Suggest a list of duties during emergencies

CHAPTER IV. CREWMEMBER QUALIFICATIONS AND DUTIES

C. OTHER REQUIRED CREWMEMBERS

(1) Qualifications

(a) Other crewmembers shall be designated by the chief pilot to perform specific functions in flight. They shall be trained as specified by the unit director of operations and will be responsible to the pilot in command for the safe operation of the aircraft. All such crewmembers will report directly to the unit chief pilot.

(b) Suggest a summary of required training

(c) Suggest a statement of trial employment as crewmember.

(2) Duties

(a) Suggest a list of duties during normal flight

(b) Suggest a list of duties during emergencies

CHAPTER IV. CREWMEMBERS QUALIFICATIONS AND DUTIES

3. CHECKING PROCEDURE

A. FLIGHT/GROUND CHECKS

(1) General

The Agency shall not use, nor shall any PIC, SIC, FE or check airman, as appropriate, serve as a flight crewmember, unless that crewmember has:

(a) For Pilots, Check Airman - within 6 calendar months preceding the month of the scheduled flight, satisfactorily completed an instrument proficiency flight check in an aircraft or agency approved aircraft simulator.

(b) For Pilots, Check Airman, and FE - within 12 calendar months preceding the month of the scheduled flight, satisfactorily completed an aircraft initial/recurrent/requalification competency check as appropriate and a flight mission/line flight check in an aircraft.

NOTE 1: Any flight check (aircraft or simulator) completed in the calendar month before or after the calendar month in which a flight check becomes due, is considered to have been completed in the month in which it was due. Therefore, the cycle dates applicable to the individual do not change.

NOTE 2: Satisfactory completion of an instrument proficiency flight check, may be substituted for the pilot competency check.

(2) Flight Check Standards

(a) General

The Agency is responsible for the standardization of Agency flightcrews and aircraft operations.

The primary means for accomplishing the standardization program will be through the use of initial and recurrent training and proficiency flight checks. These flight

checks are essential to ensure that a high level of competency and uniformity exists in flight operations.

(b) Standardization Requirements.

To enhance standardization and flight safety, the following pilot qualifications will be applicable to Agency pilots:

1 Second-in-Command. Currency in more than one large and/or turbojet aircraft shall be limited to only the number of SIC crewmembers needed to efficiently and safely accomplish flight requirements.

2 Pilot initial performance will be evaluated in accordance with the maneuvers and procedures listed in the Practical Test Standards (PTS).

3 Proficiency and Annual Check Performance will be evaluated in accordance with the maneuvers and procedures listed in the Agency Training Manual.

4 Passengers are not authorized on board aircraft during flight checks where emergency procedures are performed.

(3) Reexamination Procedures

(a) A check airman may retrain and recheck or identify the deficiency and recommend remedial training to the crewmember's immediate supervisor.

(b) Upon completion of remedial training, the crewmember's immediate supervisor will request through Chief Pilot, in writing, a reexamination check. The request shall include a verification statement that remedial training has been completed and the crewmember has reached a performance level which warrants reexamination.

1 Reexamination flight checks shall be accomplished as directed by the Agency.

2 Reexamination by the Flight Standards District Office will be required in the event of a second failure by the crewmember.

3 Until the reexamination has been satisfactorily completed, the individual shall not be used as a mission flight crewmember.

B. SIMULATOR CHECKS

SUGGESTED TOPICS

(1) Acceptable simulator use

(2) Simulator check records

C. REINSTATEMENT PROCEDURES

(1) Repeated failures

(2) Requalification Checks or Training. A lapse in pilot qualifications will require a written or oral test and a pilot competency/proficiency flight check in an aircraft or Phase II simulator. Upon satisfactory completion of a requalification check, a new pilot competency/instrument proficiency due date is established. All subsequent flight check requirements will be computed from the date of the requalification flight check.

CHAPTER IV. CREWMEMBERS QUALIFICATIONS AND DUTIES

D. REMOVAL PROCEDURES

SUGGESTED TOPICS

(1) Grounds for removal

(2) Management action

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1. POLICY

A. GENERAL

(1) Suggest a general statement regarding Management Control of Operations.

(2) Suggest a general statement regarding Director of Operations Control.

B. OPERATIONAL CONTROL

(1) Flight releases should be subject to the following conditions and requirements:

(a) Director of Operations Authority. No pilot in command should begin a flight or series of flight without a flight release from the unit director of operations.

(b) Pilot in Command Authority. The pilot in command shall initiate the flight only when convinced that the flight can be conducted safely. The pilot in command has re-release authority to the final destination to accomplish the stated mission.

(c) Contents of the Flight Release. The flight release should be in a form as required by the agency manager of flight operations, but must contain the conditions under which the flight shall be conducted.

(2) Each person operating an aircraft shall:

(a) While operating inside the United States, comply with the applicable rules in FAR Part 91; and

(b) While operating outside the United States, comply with Annex 2, Rules of the Air, to the Convention on International Civil Aviation or the regulations of any foreign country, whichever applies. Comply with any rules of FAR Part 91 that are more restrictive than that Annex or those regulations and that can be complied with without violating the Annex or those regulations. Annex 2 is incorporated by reference in FAR Part 91.703(b).

C. FLIGHT PREPARATION

(1) Suggest a general statement of Management actions in assignment, scheduling, and control of the flight.

(2) Each operating agency shall establish flight following procedures for mission aircraft. This flight following function would normally be conducted by the base or local at the direction of the unit director of operations, but may be conducted at a higher level at the discretion of the agency manager of flight operation. The minimum flight following procedures include:

(a) Responsibilities of the flight follower with regard to:

1 Flight departure duties;

2 Enroute duties, including procedures for contacting the flight crew in case of emergencies or severe weather,

3 Overdue aircraft;

(b) See Chapter VIII for details.

CHAPTER V. FLIGHT OPERATIONS PROCEDURES

2. OPERATIONS CONTROL OF AGENCY FLIGHTS

A. FLIGHTCREW ASSIGNMENT

(1) Suggest statement on crew assignment procedure

(2) Suggest check of flightcrew records by the scheduling chief.

B. MISSION ASSIGNMENT

(1) Suggest statement of consideration of past experience and training of new crews.

(2) Suggest selection of aircraft type for mission.

C. AIRCRAFT ASSIGNMENT

(1) Suggest a review of maintenance actions due and time available for the mission.

(2) Suggest a statement of need for required equipment for the mission.

D. INFORMING FLIGHTCREW OF CHANGES

(1) Suggest a statement regarding method of informing flightcrew members of changes:

(a) Mission
(b) Crewmembers
(c) Possible political, meteorological, or others

E. CHECKLISTS AND DOCUMENTS

(1) Checklists should be developed to ensure proper and safe aircraft operations and shall be used by the flight crew during the operation of the aircraft. The checklists should include at least normal and emergency procedures.

The checklists shall be developed by the operating agency by aircraft type and be approved by the agency manager of flight operations.

(2) Copies of the following documents shall remain on board the aircraft during the flight:

(a) Flight plan;
(b) Weight and balance record;
(c) Weather briefing;
(d) Passenger manifest (if applicable);
(e) Crew manifest (if applicable);
(f) Maintenance log and airworthiness release;
(g) Normal and emergency checklists for each flight crewmember,
(h) Any other documents required by the operating agency,
(i) Runway analysis/takeoff performance data.
(j) Registration Certificate
(k) Airworthiness Certificate

(3) Sterile Cockpit Procedures

During all critical flight conditions, including all ground operations, takeoffs and landings, climbs and descents, during cruise flight below 10,000 feet MSL, and at any time designated by the pilot in command, cockpit activities shall be limited to those involved with the direct operation of the aircraft. These activities exclude non-relevant conversations, radio calls that are non-ATC related, and administrative paperwork.

F. CARRIAGE OF WEAPONS

(1) Suggest a general prohibition against the carriage of weapons

(2) Suggest a statement regarding required weapons

G. CARRIAGE OF NARCOTICS OR DRUGS

CHAPTER V. FLIGHT OPERATIONS PROCEDURES

(1) Suggest a statement regarding the general prohibition against the carriage of narcotics or drugs or aircraft in accordance with the FAR 91.19

(2) Any medical oxygen carried on board any agency aircraft will be of a type and in a container approved for use on aircraft.

CHAPTER V. FLIGHT OPERATIONS PROCEDURES

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CHAPTER V. FLIGHT OPERATIONS PROCEDURES

3. PREFLIGHT ACTIONS

A. FLIGHT PLANNING - GENERAL

(1) The pilot in command is responsible for sufficient flight planning to ensure safe mission accomplishment. The following sections discuss minimum flight planning requirements. Any special flight planning requirements will be directed by either the agency manager of flight operations or the unit director of operations. The pilot in command will develop a flight plan using the information contained in this manual. This includes the use of NOAA charts and publications (or those specified by the operating agency), the aircraft operating manual and performance data, including runway analysis/takeoff performance data and the Airman's Information Manual.

(2) The following crew equipment items shall be on board the aircraft during flights:

(a) An operable flashlight powered by at least two D cell batteries or its equivalent for each crewmember;

(b) A copy of the appropriate aircraft operations manual;

(c) Copies of the aircraft performance charts appropriate to the mission requirements. These charts may be in tabulated form, but must contain the performance information extracted from the manufacturer's manual or the FAA approved airplane flight manual; and

(d) Available approach and departure charts and navigational charts and maps appropriate to the mission requirements. These should be current National Oceanic Atmospheric Administration (NOAA) charts or equivalents.

(3) The pilot in command shall ensure that the flight plan is filed with the appropriate air traffic control facility. Prior to departure, a copy of the flight plan, including appropriate documents, should be deposited with the unit director of operations, an FAA flight service station, a military base operations, a fixed base operator, or other responsible persons. The following documents should be included with this copy of the flight plan. The flight plan will be either IFR, VFR, or a composite IFR/VFR as mission requirements dictate. The flight plan should be filed on a form prescribed by the operating agency.

(a) Weather briefing;

(b) Weight and balance record;

(c) Passenger manifest (if applicable);

(d) Crew manifest;

(e) Other documents required by the operating agency; and

(f) Runway analysis/takeoff performance data.

(4) The pilot in command shall be briefed on any pertinent notices to airmen (NOTAMS) for the required mission. The NOTAMS should include, but not be limited to, departure airport, enroute, and arrival airport information. The sources of NOTAM information may be the Airman's Information Manual, an FAA flight service station, the U.S. military, or any appropriate source approved by the agency manager of flight operations.

(5) The pilot in command is responsible for performing computations using charts appropriate to the specific aircraft type and model. These computations shall include takeoff and landing data. This performance analysis shall be documented and be a part of the required flight plan package.

CHAPTER V. FLIGHT OPERATIONS PROCEDURES

B. WEATHER REPORTS AND FORECASTS

(1) The pilot in command shall receive a weather briefing from an appropriate agency during the flight planning phase. The briefing should include at least: (1) departure weather, (2) enroute weather, (3) distinction forecasts, and (4) alternate weather forecasts (if required). This briefing should be recorded on a form prescribed by the operating agency.

(2) Suggest a statement of how and where the pilot obtains the weather briefing

(3) The takeoff weather minimums shall be those shown in the appropriate NOAA document. In the absence of takeoff weather minimums for a particular airport, the following minimums shall apply to takeoffs under IFR:

(a) One statute mile visibility for aircraft, other than helicopters, having two engines or less;

(b) One-half statute mile visibility for aircraft having more than two engines; and

(c) One-half statute mile visibility for helicopters.

C. FUEL PLANNING - DOMESTIC

(1) The pilot in command must ensure that sufficient fuel is carried to allow compliance with the following criteria:

(a) Basic Fuel Requirements - VFR Flight Plan. The pilot in command must ensure that there is sufficient fuel to fly to the first point of intended landing. Assuming normal cruising speed, there must be enough fuel:

1 To fly after the first point of intended landing or for at least 30 minutes during the day or 45 minutes at night; or

2 For a rotorcraft, enough fuel to fly to the first point of intended landing and after that for at least 20 minutes.

(b) Basic Fuel Requirements - IFR Flight Plan. The pilot in command must ensure that sufficient fuel is carried (considering weather reports, forecasts, and weather conditions) to:

1 Complete the flight to the first airport of intended landing;

2 Fly from that airport to the alternate airport, if required; and

3 Fly after that for 45 minutes at normal cruising speed or, for helicopters, fly after that for 30 minutes at normal cruising speed.

(c) Alternative IFR Fuel Requirements. Agencies shall develop alternative fuel requirements when they are unable to meet the basic fuel requirements discussed above. A destination alternate should be listed on the flight plan any time the destination weather is less than 2000 feet ceiling and three miles visibility. A destination alternate need not be listed if the alternative IFR fuel requirements in this chapter are followed.

D. VISUAL INSPECTION

(1) Suggest a statement concerning the flightcrew responsibility for a preflight inspection to determine if the aircraft is fit for flight.

(2) Suggest a statement regarding the flightcrew responsibility to check the aircraft flight log to determine that maintenance problems are cleared.

(3) The following general rules should be followed when carrying cargo:

(a) Cargo should be secured by a tiedown or other approved means to prevent movement during an emergency landing.

(b) Cargo should not be loaded so as to prohibit access to any required emergency exit.

(c) When cargo is carried in cargo compartments designed to require physical entry of a crewmember to extinguish any fire that may occur during flight, it must be loaded to allow a crewmember to effectively reach all parts of the compartment with the contents of a hand-held fire extinguisher.

(d) If cargo other than carry-on baggage is carried in a passenger compartment, the current industry standards for such an operation should be followed.

E. REMOVAL OF ICE ON AIRCRAFT

(1) Suggest a statement concerning the danger of ice on the aircraft and the need for vigilance during freezing rain

(2) Suggest a statement regarding the use of the de-icing fluids for removal of ice.

F. PASSENGER RULES

(1) Each operating agency should set forth the criteria under which passengers may be carried on board agency aircraft. This criteria should include the number and types of passengers that may be carried. Passenger categories should include the following:

(a) Official passengers;
(b) Unofficial passengers;
(c) Unauthorized passengers; and

(d) Space-available passengers.

(2) When passengers are carried on board agency aircraft, the operating agency should have established procedures for ensuring that the Federal Government is released from any and all responsibility for accidental death or injury resulting from such travel. The release of liability statement should be on a form and in a manner specified by the agency manager of flight operations.

(3) When carrying passengers, the number of cabin attendants is dependent on the number of passengers. The following rules define the number of required cabin attendants relative to the passengers on board:

(a) One cabin attendant is needed for 19 but less than 51 passengers.

(b) Two cabin attendants are needed for 50 but less than 101 passengers.

(c) Two cabin attendants are needed for every 100 passengers. An additional cabin attendant is needed for each unit (or part of a unit) of 50 passengers above 100.

During takeoff and landing, cabin attendants shall be located as near as practical to required floor level exits and shall be uniformly distributed throughout the airplane to provide the most effective egress of passengers in event of an emergency evacuation.

G. BRIEFING OF PASSENGERS

(1) The pilot in command is responsible for insuring that the passengers are briefed prior to departure. This task may be delegated to any other crewmember, but the flight may not depart until all passengers are briefed.

The briefing may be communicated entirely orally or be supplemented with a printed card. The passenger briefing should include, but is not limited to the following items of information:

(a) Smoking regulations;

(b) Use of seat belts;

(c) Placement of seat backs in an upright position before takeoff and landing;

(d) Location and means of opening the passenger entry door and emergency exits;

(e) Location of survival equipment;

(f) Ditching procedures and the use of required flotation equipment (if the flight includes extended overwater);

(g) Normal and emergency use of oxygen if the flight involves operations above 12,000 feet MSL; and

(h) The location and use of the fire extinguisher.

CHAPTER V. FLIGHT OPERATIONS PROCEDURES

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4. GROUND OPERATIONS

A. ENGINE STARTING PROCEDURE

(1) Suggest a discussion of location

(2) Suggest precautions including outside personnel communications

(3) Suggest a brief discussion of action in event of engine or system trouble indications

B. FLIGHTCREW VIGILANCE

(1) Suggest a statement of the importance of vigilance on the ground and in the air.

C. TAXIING

(1) Suggest a statement concerning ATC information and clearance.

(2) Suggest a statement concerning taxi speed control

(3) Suggest a statement about precautions for engine run-up.

D. BEFORE TAKEOFF PROCEDURE

(1) Suggest a statement concerning before takeoff check list use.

(2) Suggest a brief discussion concerning intersection takeoff problems.

E. TAKEOFF EMERGENCY PLANNING

(1) Suggest a statement about PIC briefing on the takeoff, particularly in event of engine failure.

(2) Suggest a discussion of action in event of needed return to the airport.

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CHAPTER V. FLIGHT OPERATIONS PROCEDURES

5. TAKEOFF AND CLIMB

A. TAKEOFF PERFORMANCE AND LIMITS

(1) Suggest a discussion concerning takeoff limits:

(a) Accelerate - stop distance
(b) Use of over run area
(c) Initial climb restrictions

(2) Suggest a discussion of ATC clearance control.

B. ENGINE FAILURE PROCEDURE

(1) Suggest a discussion of action for failure before VI.

(2) Suggest a discussion of action for failure after VI.

C. CLIMB RESTRICTIONS

(1) Suggest a discussion of climb limits and possible obstructions.

(2) If the weather at the departure airport is below the landing minimums, a departure alternate should be specified. The departure alternate should be within the following distances for the aircraft specified:

(a) Airplanes having two engines should not be more than one hour from the departure airport at normal cruising speeds in still air with one engine inoperative.

(b) Airplanes having three or more engines should not be more than two hours from the departure airport at normal cruising speed in still air with one engine inoperative.

CHAPTER V. FLIGHT OPERATIONS PROCEDURES

D. ALTITUDE ACTIONS

(1) Suggest a list of actions at various altitudes such as 18,000 feet MSL.

CHAPTER V. FLIGHT OPERATIONS PROCEDURES

6. LEVEL FLIGHT/CRUISE

A. OXYGEN REQUIREMENTS

(1) The flight crew should adhere to the provisions of this section concerning the use of oxygen in flight. The use of oxygen in unpressurized cabin aircraft at specified altitudes is as follows:

(a) The required flight crew must use supplemental oxygen when flying at cabin pressure altitudes of between 12,500 and 14,000 feet mean sea level (MSL) for more than 30 minutes;

(b) The required flight crew must use supplemental oxygen during the entire flight time above 14,000 feet MSL; and

(c) At cabin pressure altitudes above 15,000 feet MSL, each occupant of the aircraft must be provided with supplemental oxygen.

(2) The use of oxygen in pressurized cabin aircraft at specified altitudes is as follows:

(a) At flight altitudes above flight level (FL) 250, at least a 10-minute supply of supplemental oxygen must be available for each occupant of the aircraft for use in the event that a descent is necessitated by loss of cabin pressurization.

(b) At flight altitudes above FL 350, one pilot at the controls of the airplane must be wearing and using an oxygen mask that is secured and sealed. And, that either supplies oxygen at all times or automatically supplies oxygen whenever the cabin pressure altitude of the airplane exceeds 14,000 feet MSL.

One pilot need not wear and use an oxygen mask while at or below FL 410 if there are two pilots at the controls, and each pilot has a quick-donning type of oxygen mask that can be placed on the face with one hand from the ready position within five seconds.

(c) Notwithstanding the above two paragraphs, if for any reason, and at any time it is necessary for one pilot to leave the controls of the aircraft when operating at flight altitudes above FL 250, the remaining pilot at the controls shall put on and use the oxygen mask until the other pilot has returned to the station.

B. ATC COMMUNICATIONS

(1) Suggest a short statement of normal ATC communications.

(2) Suggest a statement of communication failure procedure.

C. RESTRICTED MANEUVERS

(1) Suggest a statement and a list of prohibited maneuvers.

(2) Suggest a discussion of fuel dumping procedure.

D. REPORTING HAZARDOUS CONDITIONS

(1) Suggest procedure for reporting hazardous weather.

(2) Suggest procedure for reporting ground navigation or communication failures.

E. SEVERE WEATHER ACTIONS

(1) Icing

No aircraft should be operated in icing conditions unless it is properly equipped and certified to operate in these conditions. Sever icing, as defined in the Airman's Information Manual, should be avoided.

If the flight encounters severe icing, the conditions should be exited as soon as possible.

(2) Thunderstorm, Turbulence and Wind shear

(a) No aircraft should be operated into an area of thunderstorms unless it is equipped with a functional radar which allows the pilots to identify and circumnavigate the storms. During climbout, enroute, and descent, thunderstorms and cumulonimbus clouds (CBs) should be avoided as follows:

1 At FL 230 and above, avoid by a minimum of 20 nautical miles (NM);

2 Below FL 230, avoid by a minimum of 10 NM;

3 Use ground-based radar as the primary means of thunderstorm avoidance only to depart an area of significant weather. It should never be considered a normal avoidance procedure.

(b) The size and intensity of thunderstorms or CBs is so variable that the pilot in command must determine avoidance criteria to be used during takeoff and landing. Takeoff and landing may be made without regard to the above criteria, provided:

1 Thunderstorms or CBs and associated gust front, if present, can be avoided;

2 Distances from the thunderstorm or CBs are increased as soon as possible to meet the above criteria.

3 Missed approach courses are available to provide separation similar to that for departure.

4 Aircraft are not flown below thunderstorms, CBs, or through the rain shaft associated with these clouds; and

5 Emergency return routes or clear routes to a departure alternate are available.

(c) Each operating agency should develop aircraft specific windshear recovery procedures. These procedures may follow those recommended by the aircraft manufacturer or may follow the guidelines recommended by the FAA.

(d) Pilots should report any unexpected or severe weather phenomenon to the controlling air traffic control (ATC) Facility.

(e) Avoid thunderstorms visually, by airborne radar, or by specific request of a ground-based radar with a weather painting capability. When relying exclusively on ground-based radar for weather avoidance and the ground controller is unable to provide instructions, attempt to maintain visual meteorological conditions (VMC) by:

1 Changing flight routing;

2 Diverting to alternate airports;

3 Declaring an emergency and requesting priority assistance if unable to maintain VMC in an area of significant weather and the ground radar facility cannot provide weather avoidance service; and

4 For tactical operations below FL 230, avoid by a minimum of 5 NM;

5 Outside air temperature must be above 0 degrees Centigrade at flight altitude;

6 Avoid gust fronts and winds preceding a rapidly moving thunderstorm;

7 Avoid flying directly above thunderstorms (within 2,000 feet);

8 Avoid the rain shaft and cloud base of thunderstorms and CBs;

(3) Lightning Avoidance

(a) Lightning occurs at all levels of a thunderstorm. It also occurs in the clear air around the top and sides of storms. The following conditions are most favorable for lightning strikes and prolonged flight in them should be avoided when feasible:

1 Within 5,000 feet of the freezing level; and

2 In clouds or in any intensity of precipitation or turbulence.

(b) Pilots should report any unexpected or severe weather phenomenon to the appropriate ATC facility.

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CHAPTER V. FLIGHT OPERATIONS PROCEDURES

7. DESCENT

A. NORMAL DESCENT ACTIONS

(1) Suggest a discussion of normal precautions during descent.

(2) Suggest a discussion of altitude awareness during descent.

(3) Emergency Reporting

(a) When pilots in command of aircraft encounter emergency situations in flight, they should notify the controlling ATC facility when IFR or the flight following ATC facility when VFR. The pilots in command should notify the controlling agency of the nature of the emergency and their intentions. Further information on emergency procedures and assistance available may be found in the unit chief of flight following of the nature of the emergency and their intentions.

(b) In an inflight emergency requiring immediate action, the pilot in command may deviate from any rule or FAR to the extent required to meet that emergency. Additionally any pilot in command who deviates from a rule or FAR shall, upon request by the FAA, send a written report of that deviation to the FAA. This report should be filed through and with the coordination of the unit director of operations.

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8. APPROACH AND LANDING

A. PREPARATIONS FOR APPROACH

(1) Suggest a discussion of normal approach procedures.

(2) Suggest a discussion of approach types.

B. APPROACH LIMITATIONS

(1) Suggest stating runway length requirements.

(2) Suggest stating contaminated (ice, snow etc.) runway limits.

(3) Suggest a further discussion of microburst precautions and actions to prevent aircraft damage.

(4) When operating in the airport terminal area, pilots will comply with standard instrument approach procedures, when applicable, the Airman's Information Manual, NOAA charts and manuals, the applicable Federal Aviation Regulations listed in Appendix A to this manual, or any local airport requirements approved for the operating agency.

(5) No pilot may conduct category (CAT) II/III approaches unless specifically authorized in accordance with FAR Part 91.189. CAT II/III operations require special aircraft and flight crew authorizations. This manual does not discuss CAT II/III operations. If CAT II/III operations are to be conducted, this chapter must be supplemented to include the specific procedures. These procedures should be developed by aircraft type.

C. MISSED APPROACH PROCEDURE

(1) Suggest stating visual procedure to complete the landing.

(2) Suggest stating normal procedure for the missed approach for various types of approach procedures.

CHAPTER V. FLIGHT OPERATIONS PROCEDURES

D. PREPARATION FOR LANDING

(1) Suggest final checklist procedure.

(2) Suggest discussion of possible final approach problems.

E. LANDING LIMITATIONS

(1) Suggest required runway length

(2) Suggest action for crosswind landing.

F. DEPARTING RUNWAY

(1) Suggest discussion of ATC control

(2) Suggest discussion of checklist action only after departing runway.

CHAPTER V. FLIGHT OPERATIONS PROCEDURES

9. TAXIING AND PARKING

A. TAXI PRECAUTIONS

(1) Suggest the manual reemphasize flightcrew vigilance

(2) Suggest a short reminder of ATC control and taxi speed precautions.

B. PARKING

(1) Suggest a discussion of parking precautions.

C. ENGINE AND SYSTEMS SHUT-DOWN

(1) Suggest use of checklists

(2) Suggest signals to passenger compartment.

D. DISCHARGE OF PASSENGERS AND CARGO

(1) Suggest a discussion of passenger deplane precautions.

(2) When agency aircraft are used in the transportation of cargo, the responsibility for safe delivery is shared by the operating agency and the pilot in command. After accepting the cargo for delivery on the flight, the pilot in command becomes the final authority for the safe delivery of that cargo.

(3) The agency is responsible for the cargo prior to the pilot in command's acceptance at the origination, after delivery to the destination, and prior to delivery to the accepting authority. Each agency accepting cargo for delivery should develop procedures to protect the cargo from damage at both ends of the delivery process. These procedures should address damage protection from elements of weather and tampering.

(4) Once the cargo reaches the final destination, the agency should ensure that adequate off-load equipment is available to handle it. The pilot in command should be considered the final authority of the destination off-loading process.

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10. RECORDS

A. FLIGHT RECORDS

(1) Suggest a summary of the flight records required including FORM numbers.

(2) Suggest a discussion of routing of flight records

B. CREWMEMBER RECORDS

(1) Suggest a summary of crewmember records required including FORM numbers.

(2) Suggest a discussion of routing of crewmember records.

C. MAINTENANCE RECORDS

(1) Suggest a summary of PIC actions regarding maintenance records and the Flight Log Book.

(2) Suggest a summary of PIC actions to assume maintenance personnel are aware of problems with the aircraft.

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CHAPTER VI. INTERNATIONAL AND EXTENDED OVERWATER FLIGHT

1. GENERAL

A. INTERNATIONAL OPERATIONS

(1) When operating outside the United States, operating agencies must observe rules and procedures governing international flight.

(2) Suggest a discussion of ICAO and Rules of the particular country.

(3) Suggest a list of Countries which are not ICAO.

(4) Suggest a summary of areas controlled by the USA.

B. EXTENDED OVERWATER OPERATIONS

(1) Suggest a short discussion of the dangers of extended overwater operations.

(2) Suggest a short definition of extended overwater operations.

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CHAPTER VI. INTERNATIONAL AND EXTENDED OVERWATER FLIGHT

2. INTERNATIONAL OPERATIONS

A. REGULATIONS

(1) Each agency conducting operations outside the 48 contiguous states (except for intrastate operations in Alaska and Hawaii) or over international waters must supplement this section. The supplement should provide specific procedures and qualifications required for international flights.

(2) When operating outside the United States, each pilot in command shall comply with the following rules:

(a) When over the high seas, Annex 2 (Rules of the Air) to the Convention on International Civil Aviation; (See Appendix E)

(b) When within a foreign country, the country's rules relating to the flight and maneuver of aircraft; and

(c) When over the North Atlantic within airspace designated as minimum navigation performance specifications (MNPS) airspace, with the navigation performance requirements located in section B(2).

(3) When operating outside the United States, the pilot in command should use the ICAO flight plan form when filing a flight plan. The Airman's Information Manual may be used to assist in the completion of the form. The NOAA flight planning information contained in applicable publications can be invaluable assistance in preparing the form.

B. FLIGHT AND AIR TRAFFIC RULES

(1) Suggest a short statement followed by reference to appropriate sections of ICAO Annex 2 in Appendix E.

(2) North Atlantic MNPS airspace is that volume of airspace between FL 275 and FL 400 extending between latitude 27 degrees north and the North Pole. It is bounded in the East by the eastern boundaries of control areas Santa Maria Oceanic, Shanwick Oceanic, and Reykjavik Oceanic. In the West, it is bounded by the western boundary of Reykjavik Oceanic Control Area, the western boundary of Gander Oceanic Control Area, and the western boundary of New York Oceanic Control Area, excluding the areas west of 60 degrees west and south of 38 degrees 30 minutes north.

(3) The navigation performance capability required for aircraft to be operated in the airspace defined above is as follows:

(a) The standard deviation of lateral track errors shall be less than 6.3 NM (11.7 Km).

(b) The portion of the total flight time spent by aircraft 30 NM (55.6 Km) or more off the cleared track shall be less than 1 hour in 1,887 flight hours.

(c) The proportion of the total flight time spent by aircraft between 50 NM and 70 NM (92.6 Km and 129.6 Km) off the cleared track shall be less than 1 hour in 7,693 flight hours.

(4) Air traffic control may authorize an aircraft operator to deviate from the requirements of this section for a specific flight if, at the time of flight plan filing, ATC determines that the aircraft may be provided appropriate separation and that the flight will not interfere with, or impose a burden upon, the operations of other aircraft which meet the requirements of this section.

C. COMMUNICATIONS

(1) Suggest a discussion of proper communication with foreign air traffic controllers. Stress the importance of the use of proper terms. Refer to appropriate sections of ICAO Annex 2 in Appendix E.

(2) Suggest each Agency supply a following communication system to be used as a source of information.

D. WEATHER SOURCES

(1) International Civil Aviation Organization (ICAO) weather reports and sequences are somewhat different from those of the National Weather Service. A sample weather report has been included in Attachment 1 to aid the pilot in command in extracting the necessary information when operating outside the United States.

(2) Suggest a discussion of available commercial weather sources.

E. CREWMEMBER DUTIES

(1) Suggest a review of crewmember duties and concerns in International Operations.

(2) Suggest a short review of crewmember actions as they reflect on the Agency and the United States of America.

F. REQUIRED DOCUMENTS

(1) Suggest a list and statement of required documents for crewmembers and passengers

(a) Passport

(b) Diplomatic Clearances

(c) Customs

(d) Immigration

(e) Public Health - International Certificate of Vaccination

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CHAPTER VI. INTERNATIONAL AND EXTENDED OVERWATER FLIGHT

3. EXTENDED OVERWATER OPERATIONS

A. RULES FOR AIRCRAFT TYPES

Suggest a discussion of rules for:

(1) Single-engine airplanes

(2) Single-engine helicopters

(3) Multiengine aircraft

B. ACTIONS FOR EMERGENCIES

(1) Suggest a discussion of emergency communications.

(2) Suggest a discussion of other emergency actions.

C. DITCHING PROCEDURE

(1) Suggest a list of actions similar to the following:

(a) If possible, land parallel to the major swell, preferably with some headwind component.

(b) The direction of the major swell is best assessed from any altitude between 500 and 1000 feet.

(c) Use radio altimeter when available to determine height above surface.

(d) If possible, land with power on, at minimum speed and minimum rate or descent, with the landing gear retracted.

(e) Do not stall the airplane.

(f) Prior to impact, give the brace-for-impact signal (three chimes/bells for announcement).

(2) Suggest a diagram of ditching relative to wave swells similar to that in AIM Figure 6-3.

(3) Suggest a list of flightcrew actions similar to the following:

The evacuation procedures for water ditching are essentially the same as on land, with the following exceptions:

(a) PIC

1 Put on life vest prior to water landing
2 Exit through the flight compartment emergency exit (if applicable) or other available exit.
3 When outside the aircraft inflate Life Vest.
4 Assist passengers in evacuation and use of flotation devices.
5 Instruct passengers to join arms (interlock) and hold cushions close to their chests when applicable.
6 Assemble passengers in a circle near the floating aircraft.

(b) SIC

1 Put on life vest prior to water landing.
2 Exit through the flight compartment exit (if applicable).
3 Inflate life vest and proceed to right side forward emergency exit. If under water, proceed to opposite side.
4 Assist passengers in evacuation and use of flotation devices.
5 Instruct passengers to join arms (interlock) and hold cushions close to their chests when applicable.

CHAPTER VI. INTERNATIONAL AND EXTENDED OVERWATER FLIGHT

4. SURVIVAL EQUIPMENT

A. EXTENDED OVERWATER

(1) Suggest a list of equipment for overwater flight

B. TROPICAL/DESERT

(1) Suggest a list of equipment for flight over unpopulated tropical areas.

(2) Suggest a list of equipment for flight over unpopulated desert areas.

C. ARCTIC

(1) Suggest a list of equipment for flight over arctic areas.

(2) Suggest a list of equipment for flight over arctic ocean areas.

D. INSPECTION OF EQUIPMENT

(1) Suggest a discussion of flightcrew duties in inspection of survival equipment.

(2) Suggest a discussion of flightcrew duties regarding proper storage of survival equipment.

E. BRIEFING OF PASSENGERS

(1) Suggest a discussion of passenger briefing for evacuation and other emergencies.

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CHAPTER VII. WEIGHT AND BALANCE

1. GENERAL

A. AGENCY ACTION

(1) The aircraft shall be loaded in accordance with the manufacturer's recommendations. The weight and balance shall be recorded on a form and in a manner prescribed by the operating agency. The pilot in command must ensure that the form has been properly prepared. As a minimum, the weight and balance form must contain the following information:

(a) Total number of passengers;

(b) Total weight of the loaded airplane;

(c) Maximum allowable takeoff and landing weights for that flight;

(d) Center of gravity limits;

(e) Center of gravity of the loaded airplane (except that the actual center of gravity need not be computed if the airplane is loaded according to a loading schedule or other approved method that ensures that the center of gravity of the loaded aircraft is within approved limits.

B. EFFECTS OF BEYOND LIMITS

(1) Suggest a statement of the effects of over weight on performance.

C. REQUIRED DOCUMENTATION

(1) Suggest citing the Agency weight and balance documentation for the aircraft.

(2) Suggest the action of the PIC be cited for each flight.

CHAPTER VII. WEIGHT AND BALANCE

D. REWEIGH SCHEDULE

(1) Suggest a statement regarding periodic or special reweigh schedules.

(2) Suggest a discussion of flightcrew duties regarding proper storage of survival equipment.

CHAPTER VII. WEIGHT AND BALANCE

2. STANDARD LOADS

A. CREWMEMBERS AND EQUIPMENT

(1) Suggest a list of crewmembers standard weights

(2) Suggest a list of crewmember baggage weights

(3) Suggest a statement of equipment weights such as manuals and charts

B. PASSENGERS AND BAGGAGE

(1) Suggest a statement of passenger standard weight

(2) Suggest an indication of passenger weight with baggage

C. CARGO

(1) Suggest an indication of cargo weight limits at various locations

D. FUEL

(1) Suggest a statement of standard fuel load weight

E. STANDARD LOADING SCHEDULES

(1) Suggest a definition of Standard Loading Schedule

(2) Suggest a list of variation to the Standard Loading Schedule

(3) Suggest a definition of the use of BASIC or EMPTY WEIGHT and the effect on WT & Bal. calculations.

CHAPTER VII. WEIGHT AND BALANCE

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CHAPTER VII. WEIGHT AND BALANCE

3. NON-STANDARD LOADS

A. NON-STANDARD FUEL

(1) Suggest actions with excess fuel

(2) Suggest actions with below standard fuel

B. NON-STANDARD PASSENGERS, CARGO, OR EQUIPMENT

(1) Suggest procedure for passenger loads more or less than standard, including seating priority

(2) Suggest procedure for cargo loads more or less than standard, including locations

(3) Suggest procedure for equipment loads more or less than standard

C. CALCULATIONS WITH NON-STANDARD LOADS

(1) Suggest a short procedure for calculating weight and balance with non-standard loads

CHAPTER VII. WEIGHT AND BALANCE

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CHAPTER VII. WEIGHT AND BALANCE

4. SHIFT OF LOADS

A. CORRECTING OUT OF BALANCE

(1) Suggest providing a simplified method to correct out of balance conditions

B. EFFECTS OF FUEL CONSUMPTION

(1) Suggest a statement of weight shift with swept-wing aircraft.

(2) Suggest a statement of weight shift with straight-wing and fuselage tanks.

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CHAPTER IX. EMERGENCY PROCEDURES

1. FLIGHT LOCATING ACTIONS

A. FLIGHTCREW ACTIONS

(1) Aircraft Location

Suggest text similar to the following:

The PIC shall ensure that the Chief Pilot is kept aware of the location of the aircraft by transmitting a daily flight report prior to the end of the duty day and include the next day's itinerary. The report shall include:

(a) Aircraft N number.

(b) PIC's name.

(c) Location of aircraft.

(d) Crews hotel and phone number.

(e) Status of aircraft.

(f) Any remarks deemed appropriate by the PIC.

If no phone is available the H.F. or the flight phone , or any available communications media may be used to ensure that the Chief Pilot knows where the aircraft is at all times.

(2) Flight Plan

The PIC shall ensure that a flight plan is filed, as applicable. The use of an IFR Flight Plan is strongly encouraged. At all times the PIC shall ensure that Air Traffic Control, Flight Service, or Airways Facilities is aware of the location of the aircraft.

CHAPTER IX. EMERGENCY PROCEDURES

B. AIR TRAFFIC CONTROL ACTIONS

(1) Suggest a statement that ATC shall assure that they are aware of aircraft location at all times.

C. OPERATIONS BASE ACTION

Suggest Text similar to the following:

(1) These flight locating procedures are to ensure the safety of the crews. If an aircraft is late or missing, the Chief Pilot is responsible to ensure that appropriate aircraft search and rescue procedures are initiated.

(2) A flight will be considered overdue when a planned landing is not made at the destination airport and communications with the flightcrew are lost.

In the event of an overdue aircraft the Chief Pilot and the Chief of Scheduling Supervisor or person delegated that responsibility shall take the following actions:

(a) Notification of Management

1 Unit Director of Operations
2 Agency Manager of Flight Operations
3 Chief of Maintenance
4 Others as directed by the Manager

(b) Air Traffic Centers

(c) Local airports where the aircraft may be expected to land.

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CHAPTER IX. EMERGENCY PROCEDURES

1. GENERAL PROCEDURES

Suggest procedures similar to the following:

A. All flight personnel must be thoroughly familiar with all emergency procedures and their specific duty assignments.

B. No employee, regardless of involvement in an emergency situation, is authorized to make statements to the general public or to news gathering agencies without the knowledge and consent of the Agency.

C. In an emergency involving the safety of persons or property, the PIC may deviate from the rules of this manual, relating to aircraft, equipment and weather minimums to the extent required to meet that emergency.

D. Each PIC who deviates from a rule during an in-flight emergency requiring immediate action, shall upon request through official channels, send a written report of that deviation to the Administrator or designated FAA offices.

E. It is important that an exact account of the problem be stated and relayed to the Agency.

CHAPTER IX. EMERGENCY PROCEDURES

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CHAPTER IX. EMERGENCY PROCEDURES

2. IN-FLIGHT EMERGENCY

Suggest procedures similar to the following:

A. GENERAL

Under any flight emergency condition, the PIC is responsible for the successful completion of the flight. He/She is in full and complete command and all personnel shall execute his/her orders precisely. He/She may deviate from prescribed procedures, methods, weather minimums, and regulations in the interest of safety. If a PIC decides that an emergency condition exists during the flight when appropriate, he will contact an Air Traffic Facility and advise of the problem and request any needed assistance. After landing, he/she will inform the Chief Pilot of the emergency/problem.

B. EMERGENCY CREW ASSIGNMENTS

(1) The PIC is the final authority regarding the sequence and manner in which crewmembers will accomplish procedures.

(2) Flight crewmember must accomplish from memory the specific immediate action (phase one) items specified for their station and should be familiar with other crewmembers assigned duties.

(3) Report position and nature of the emergency to Air Traffic Control (ATC). If additional assistance is required, request ATC to relay to an appropriate communications center. The PIC is the final authority in any decisions concerning actions to be taken, however, consideration should be given to recommendations given by ATC and/or other sources.

(4) Each crewmember must be prepared to perform their assigned emergency duties including possible evacuation duties.

CHAPTER IX. EMERGENCY PROCEDURES

C. DISTRESS AND URGENCY COMMUNICATIONS

(1) Distress and urgency communications procedures discussed in the following paragraphs relate to the use of air ground voice communications.
NOTE: Distress is the same as an emergency, urgency is the same as a precautionary condition.

(2) The initial communication, and if considered necessary, any subsequent transmissions by an aircraft in distress should begin with the signal MAYDAY, preferably repeated three times. The signal PAN-PAN should be used in the same manner of an urgency condition.

(3) Distress communications have absolute priority over all other communications, and the word MAYDAY commands radio silence on the frequency in use. Urgency communications have priority over all other communications have priority over all other communications except distress, and the word PAN-PAN warns other stations not to interfere with an urgency transmission.

(4) Normally, the station addressed will be the air traffic facility or other agency providing air traffic services, on the frequency in use at the time. If the pilot is not communicating and receiving services, the station to be called will normally be the air traffic facility or other agency in whose area of responsibility the aircraft if operating, on the appropriate assigned frequency. If the station addressed does not respond, or if time or the situation dictates, the distress or urgency message may be broadcast, or a collect call may be used, addressing "Any Station (Tower)(Radio)(Radar)."

(5) The station addressed should immediately acknowledge a distress or urgency message, provide assistance, coordinate and direct the activities of assisting facilities, and alert the appropriate search and rescue coordinator if warranted. Responsibility will be transferred to another station only if better handling will result.

(6) All other stations, aircraft and ground, will continue to listen until it is evident that assistance is being provided. If any station becomes aware that the station being called either has not received a distress or urgency message, or cannot communicate with the aircraft in difficulty, it will attempt to contact the aircraft and provide assistance.

(7) Although the frequency in use or other freq uencies assigned by ATC are preferable, the following emergency frequencies can be used for distress or urgency communications, if necessary or desirable:

(a) 121.5 MHz and 243.0 MHz - Both have a range generally limited to line of sight. 121.5 MHz is guarded by direction finding stations and some military and civil aircraft. 243.0 MHz is guarded by military aircraft. Both 121.5 MHz and 243.0 MHz are guarded by military towers, most civil towers, FSSs, and radar facilities. Normally ARTCC emergency frequency capability does not extend to radar coverage limits. If an ARTCC does not respond when called on 121.5 MHz or 243.0 MHz, call the nearest tower or FSS.

(b) 2182 KHz - The range is generally less than 300 miles for the average aircraft installation. It can be used to request assistance from stations in the maritime service. 2182 KHz is guarded by major radio stations serving Coast Guard Rescue Coordination Centers and Coast Guard units along the sea coasts of the U.S. and shores of the Great Lakes. The call "Coast Guard" will alert all Coast Guard Radio Stations within range. 2182 KHz is also guarded by most commercial coast stations and some ships and boats.

D. OBTAINING EMERGENCY ASSISTANCE

(1) A pilot in any distress or urgency condition should immediately take the following action, not necessarily in the order listed, to obtain assistance:

(a) Climb, if possible, for improved communications, and better radar and direction finding detection.

(b) If equipped with a radar beacon transponder (civil) or IFF/SIF (military):

1 Continue squawking assigned MODE A/3 discrete code/VFR code and MODE C altitude encoding when in radio contact with an air traffic facility or other agency providing air traffic services, unless instructed to do otherwise.

2 If unable to immediately establish communications with an air traffic facility/agency, squawk MODE A/3, Code 7700/Emergency and MODE C.

(c) Transmit a distress or urgency message consisting of as many as necessary of the following elements, preferably in the order listed:

1 If distress, MAYDAY. MAYDAY. MAYDAY; if urgency, PAN-PAN, PAN-PAN, PAN-PAN.
2 Name of station addressed.
3 Aircraft identification and type.
4 Nature of distress or urgency.
5 Weather.
6 Pilots intentions and request.
7 Present position, and heading, or if lost, last known position, time, and heading since that position.
8 Altitude or flight level.
9 Fuel remaining in hours and minutes.
10 Number of people on board.
11 Any other useful information.

(2) After establishing radio contact, comply with advice and instructions received. Cooperate. Do not hesitate to ask questions or clarify instructions when you do not understand or if you cannot comply with clearance. Assist the ground station to control communications on the frequency in use. Silence interfering radio stations. Do not change frequency or change to another ground station unless absolutely necessary. If you do, advise the ground station of the new frequency and station name prior to the change, transmitting in the blind if necessary. If two-way communications cannot be established on the new frequency, return immediately to the frequency or station where two-way communications last existed.

(3) When in a distress condition with crash landing or ditching imminent, take the following additional actions to assist search and rescue units:

(a) Time and circumstances permitting, transmit as many as necessary of the message elements as previously listed and any of the following that you think might be helpful:

1 ELT status.
2 Visible landmarks.
3 Aircraft color.
4 Number of persons on board.
5 Emergency equipment on board.

(b) Actuate your ELT if the installation permits.

(c) For an off-airport landing, if risk of fire is not a consideration, set your radio for continuous transmission.

(d) If it becomes necessary to ditch, make every effort to ditch near a surface vessel. If time permits, an FAA facility should be able to get the position of the nearest commercial or Coast Guard vessel from a Coast Guard Rescue Coordination Center.

When ditching, the direction of the wave swell is as important as the wind direction. A reasonable landing can be made parallel to the swell is as important as the wind direction. A reasonable landing can be made parallel to the swell and into the swell on the back side. A primary rule is to avoid the face of a swell. Ditching should be made at a semi-stalled speed with the use of engine power. Care must be taken not to drop the aircraft from too high an altitude or to balloon due to excessive speed. It is preferable to execute the ditching before all power is lost when a low fuel condition exists. After the aircraft is in the water, it should stop very suddenly. All crewmembers should be prepared for the shock of stopping and be ready to evacuate the aircraft according to emergency procedures.

(e) After an off-airport landing unless you have good reason to believe that you will not be located by search aircraft or ground teams, it is best to remain with your aircraft after the emergency evacuation and prepare means of signalling search aircraft.

E. COMMUNICATION FAILURE

Should a two-way communication failure occur, the PIC should alert ATC by the following methods:

(1) Turn transponder to Code 7700 for one (1) minute.

(2) Change Code to 7600 and remain on 7600 for 15 minutes and repeat steps (1) and (2) as practicable.

(3) If the communication failure occurs in VFR flight, the flight shall remain in VFR conditions. If the failure occurs in IFR flight PIC shall initiate actions regarding the roue, altitude and leaving the clearance limit in accordance with FAR 91.185.

CHAPTER IX. EMERGENCY PROCEDURES

F. ENGINE FAILURE NOTIFICATION

(1) The PIC shall report each unscheduled engine stoppage in flight to the appropriate ground air traffic controlling facility as soon as practical, keeping the facility informed as to the progress of the flight.

(2) As soon as practical after shutdown, the PIC should notify the Chief Pilot of such action. Additionally when practical, the PIC should keep the Chief Pilot informed as to the progress of the flight (to the airport of intended landing).

G. CONTINUING FLIGHT IN UNSAFE CONDITIONS

The unsafe condition may be in the form of weather conditions or malfunctioning equipment. If the problem involves the failure of some instrument or other piece of equipment, operation shall be conducted as per the approved procedure in the POH/AOM.

(1) Unsafe Airport.

No PIC may continue toward an unsafe airport unless, in their opinion, there is no safer airport available. In this event, the flight is considered to be operating as an Emergency Operation.

(2) Engine Failure.

(a) Two-Engine Aircraft. The PIC shall land at the nearest suitable airport when one of the engines becomes inoperative.

(b) Three or Four-Engine Aircraft. When one engine of a three or four-engine aircraft becomes inoperative, the PIC may proceed with action deemed to be as safe as an immediate landing. If two engines become inoperative, the PIC shall land the aircraft at the nearest suitable airport.

CHAPTER IX. EMERGENCY PROCEDURES

3. HIJACK PROCEDURE

Suggest procedures similar to the following:

A. A special emergency is a condition of hijack or other hostile act by a person(s) aboard an aircraft, which threatens the safety of the aircraft or its passengers.

B. The pilot of an aircraft reporting a special emergency condition should:

(1) If circumstances permit, apply distress or urgency radio-telephone procedures. Include the details of the special emergency.

(2) If circumstances do not permit the use of prescribed distress or urgency procedures, transmit:

(a) On the air/ground frequency in use at the time.

(b) As many as possible of the following elements spoken distinctly and in the following order:

1 Name of the station addressed (time and circumstances permitting).

2 The identification of the aircraft and present position.

3 The nature of the special emergency condition and pilot intentions (circumstances permitting).

4 If unable to provide this information, use code words and/or transponder as follows: 'TRANSPONDER SEVEN FIVE ZERO ZERO'. Meaning: "I am being hijacked/forced to a new destination"; and/or use Transponder Setting MODE 3/A, Code 7500.

NOTE--Code 7500 will never be assigned by ATC without prior notification from the pilot that his/her aircraft is being subjected to unlawful interference. The pilot should refuse the assignment of Code 7500 which will trigger the special emergency indicator in all radar ATC facilities.

C. Air traffic controller will acknowledge and confirm receipt of transponder Code 7500 by asking the pilot to verify it. If the aircraft is not being subjected to unlawful interference, the pilot should respond to the query by broadcasting in the clear that he is not being subjected to unlawful interference. Upon receipt of this information, the controller will request the pilot to verify the code selection depicted in the code selector windows in the transponder control panel and change the code to the appropriate setting. If the pilot replies in the affirmative or does not reply, the controller will not ask further questions but will flight follow, respond to pilot requests and notify appropriate authorities.

D. If it is possible to do so without jeopardizing the safety of the flight, the pilot of a hijacked passenger aircraft, after departing from the cleared routing over which the aircraft was operating, will attempt to do one or more of the following things, insofar as circumstances may permit:

(1) Maintain a true airspeed of no more than 400 knots, and preferably an altitude of between 10,000 and 25,000 feet.

(2) Fly a course toward the destination which the hijacker has announced.

E. If these procedures result in either radio contact or air intercept, the pilot will attempt to comply with any instructions received which may direct him to an appropriate landing field.

CHAPTER IX. EMERGENCY PROCEDURES

4. BOMB THREAT PROCEDURE

The following immediate action shall be taken when there is reason to believe that a bomb has been placed aboard an Agency aircraft:

A. The nearest air traffic control facility shall be informed and requested to notify appropriate civil authorities responsible for search, security, crowd control, and fire.

B. In flight, the crew shall immediately conduct a bomb search, if possible. The passengers (if applicable) shall be advised of the situation and will be briefed on any emergency procedures deemed appropriate. The PIC shall land the aircraft as soon as possible. The crew shall not touch or move any bomb device that may have been identified on the aircraft.

C. On itinerary, The PIC shall supervise any isolation directed by the control tower and shall direct the evacuation of crew and passengers (if applicable).

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CHAPTER X . ACCIDENT, INCIDENT PROCEDURE
. REPORTING PROCEDURES

Suggest text similar to the following:

A. GENERAL

(1) These procedures are applicable to all flightcrew personnel and Agency owned, operated, leased and rented aircraft.

(2) The PIC or a representative shall be responsible for reporting an occurrence to the Chief Pilot and securing the scene as necessary.

(3) The Chief Pilot shall be responsible for reporting an accident or incident to the NTSB in accordance with NTSB Part 830, and/or other offices or agencies as directed.

(4) For accident reporting use NTSB Form 6120.1/2.

(5) FAA personnel shall not discuss an occurrence or liability with the public or the media without the knowledge and consent of Agency Manager of Flight Operations. All questions shall be referred to the Agency.

B. WRITTEN REPORTS

Should any of the following situations occur, and in the interest of immediate notification, the PIC shall take the appropriate steps to notify the Chief Pilot, as well as submit a written Aeronautical Occurrence Report to the Agency.

(1) Aircraft departing and:

(a) Takeoff aborted due to mechanical failure

(b) Takeoff and immediate return due to mechanical failure

(c) Takeoff and diversion due to mechanical failure

(2) Aircraft arriving and the landing is aborted due to mechanical failure

(3) An aircraft accident or any of the following listed incidents occurs:

(a) Flight control systems malfunctions or failures

(b) Inability of any required flight crewmember to perform their normal flight duties as a result of injury or illness during flight

(c) Failure of structural components of turbine engine, props, etc.

(d) In-flight fire, or smoke in cockpit

(e) Aircraft collision while in flight with any object

(4) Aircraft damage for any reason on ground or inflight

(5) Crew or ATC disputes

(6) Any declared emergency

(7) Any unsafe gear situation or engine failure

C. REQUIRED INFORMATION

(1) When an aircraft or crewmember is involved in an accident, incident, or other occurrence the PIC or a representative shall immediately, by the most expeditious means available, report to the Chief Pilot all information which is pertinent to the occurrence.

(2) The Chief Pilot shall ensure through the Flight Standards District Office expeditious notification to the field office of the NTSB nearest the accident or incident when any of the following occur:

CHAPTER X . ACCIDENT, INCIDENT PROCEDURE

(a) Overdue aircraft

An aircraft is overdue when a planned landing is not made at the destination airport and communications with the aircraft are lost.

(b) Aircraft accident

An aircraft accident is an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage.

(c) A fatal injury is any injury which results in death within 30 days of the accident.

(d) A serious injury is any injury which results in:

1 hospitalization for more than 48 hours, commencing within 7 days from the date of the injury.

2 a fracture of any bone (except simple fractures of the nose, fingers or toes).

3 severe hemorrhaging.

4 nerve, muscle, tendon or internal organ damage.

5 second-or-third degree burns or any burns affecting more than 5 percent of the body surface.

(e) Substantial damage is any damage or failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. Not considered substantial damage are:

1 engine failure or damage limited to an engine if only one engine fails or is damaged.

2 bent fairings or cowlings.

3 dented skin or small puncture holes in the skin or fabric.

4 ground damage to rotor or propeller blades.

5 damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips.

(f) Aircraft incident

An aircraft incident is an occurrence involving the operation of an aircraft in which a hazard or potential hazard to safety is involved but which is not classified as an accident due to the circumstances of the occurrence, degree of injury, or the extent of damage. For the purpose of notification, investigation, and reporting, the following occurrences must be reported.

1 Flight control system malfunction or failure;

2 Inability of any required flight crewmember to perform normal flight duties as a result of injury or illness;

3 Failure of structural components of a turbine engine excluding compressor and turbine blades and vanes;

4 Fire in-flight.

5 Aircraft collision in flight.

6 Damage to property, other than the aircraft, estimated to exceed $25,000 for repair (including materials and labor) or fair market value in the event of total loss, whichever is less.

7 For large multiengine aircraft (more than 12,500 pounds maximum certificated takeoff weight):

a In-flight failure of electrical systems which requires the sustained use of an emergency bus powered by a back-up source such as a battery, auxiliary power unit, or air-driven generator to retain flight control or essential instruments;

b In-flight failure of the hydraulic systems that results in sustained reliance on the sole remaining hydraulic or mechanical system for movement of flight control surfaces;

c Sustained loss of the power or thrust produced by two or more engines;

d Evacuation of an aircraft in which an emergency egress system is utilized.

CHAPTER X . ACCIDENT, INCIDENT PROCEDURE

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CHAPTER X. ACCIDENT, INCIDENT PROCEDURE

2. ACCIDENT OR INCIDENT SCENE SECURITY

A. GENERAL

The PIC or PIC representative shall:

(1) Request the assistance of local law enforcement agencies, Civil Air Patrol, and other government agencies for security of the accident/incident scene until released to the NTSB or FAA investigator in charge.

(2) Ensure that aircraft wreckage, cargo etc. is not moved or disturbed except to the extent necessary:

(a) to remove trapped or injured persons.

(b) to protect equipment/material from further damage.

(c) to protect the public from injury.

(3) When it is necessary to move aircraft wreckage, cargo etc., sketches, descriptive notes and photographs shall, to the extent possible, be used to document original positions and conditions of the wreckage and any significant impact marks.

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CHAPTER X. ACCIDENT, INCIDENT PROCEDURE

3. OTHER OCCURRENCES

Other occurrences are those occurrences which are not reportable to NTSB but require notification to the Chief Pilot and higher headquarters, and include but are not limited to:

A. GROUND OPERATIONS OCCURRENCES

(1) Loss of life or serious injury which occur as a result of personnel present in or on an aircraft or in direct contact with the aircraft or with anything attached during ground operations while the engines are functioning without the intention of flight.

(2) Substantial damage to the aircraft sustained during ground operations with the engines functioning without the intention of flight.

(3) Servicing aircraft with improper fuel and/or other aviation fluids.

B. IN-FLIGHT OCCURRENCES

(1) Rapid decompression requiring emergency action.

(2) Failures requiring emergency action.

(3) Accumulations of smoke or toxic fumes in occupied spaces.

(4) Unplanned or asymmetrical thrust reversal.

(5) Total electrical failures in multiengine aircraft (12,500 pounds or less maximum certificated takeoff weight).

(6) Total electrical failures in single-engine aircraft while operating in instrument meteorological conditions.

(7) Unscheduled in-flight engine shutdown.

(8) Damage from hail, birdstrikes, or turbulence.

(9) Near midair collisions.

(10) Gear-up landings or collisions with the ground or objects other than aircraft.

C. OTHER OCCURRENCES

(1) Fires not incident to flight.

(2) Ni-Cad battery overtemperature failures.

(3) Hazardous materials incidents.

(4) Damage to non-government property.

(5) Occurrences which may generate unfavorable publicity

(6) Any significant occurrence related to aviation safety, including, but not limited to:

(a) threats (bomb or otherwise).

(b) sabotage.

(c) hijacking.

(7) Flightcrew occurrences while in a TDY status.

(a) Sickness.

(b) Injury.

(c) Incarceration.

(8) Any occurrence which in the judgement of the PIC or a representative should be brought to attention of the Chief Pilot or higher headquarters.

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CHAPTER XI. MAINTENANCE

1. GENERAL MAINTENANCE PRACTICES

To ensure that aircraft are kept in a continuous state of airworthiness, each agency should standardize methods and procedures for their total mission management maintenance effort.

A. MAINTENANCE CRITERIA

The basic tenets of a viable maintenance program are:

(1) Each agency that operates an aircraft is primarily responsible for maintaining that aircraft in an airworthy condition.

(2) No person may perform maintenance, preventative maintenance, or alterations on an aircraft other than prescribed by the agency responsible for the aircraft.

(3) No person may operate an aircraft unless a manufacturer's maintenance manual or instructions for continued airworthiness has been issued and the mandatory replacement times, inspection intervals, and related procedures set forth in appropriate manuals approved by the agency have been complied with.

B. MAINTENANCE RECORDS

(1) Each agency shall establish procedures for creating and maintaining aircraft historical records. These records shall include a record of maintenance, preventative maintenance and alterations, and records of annual, progressive, and other required or approved inspections, as appropriate for each aircraft (including the airframe) and each engine, propeller, rotor, and appliance of an aircraft. Records should include a description of work performed, the date of completion of the work performed, and the signature of the person approving the aircraft's return to service. To be all inclusive, these records should also contain the following information:

(a) Total time in service of the airframe, each engine, and propeller;

(b) Current status of the life-limited parts of each airframe, engine, propeller, rotor, or appliance;

(c) Time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specific time basis;

(d) Identification of the current inspection status of the aircraft, including time since last inspection required by the inspection program under which the aircraft and its appliances maintained; and

(e) Current status of applicable airworthiness directives, including for each, the method of compliance, the AD number, and revision date. If the AD involves recurring action, the time and date of the next action is required.

(2) Each agency should establish an aircraft maintenance log. This log, normally in book form, is intended to record daily maintenance activities and aircraft status and provide data to the aircraft historical record and for use in pilot preflight. It will contain a record of irregularities, corrective actions, component replacement, and routine maintenance. Verbal communications are not a substitute for written log entries.

C. MAINTENANCE OF LARGE AIRCRAFT

No person may operate a large aircraft, turbojet multiengine aircraft, or turbo-propeller powered multiengine aircraft unless the replacement times for life-limited parts specified in the aircraft specifications, type data sheets, or other documents approved by the agency are complied with. The aircraft, including the airframe, engines, propellers, appliances, survival equipment and emergency equipment must be inspected in accordance with an inspection program approved by the aircraft manufacturer's specifications or agency manager of flight operations.

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D. RETURNING AIRCRAFT TO SERVICE

(1) No person may operate an agency aircraft which has undergone maintenance, preventative maintenance, rebuilding, or alteration, unless:

(a) It has been approved for return to service by a person authorized by the agency operating that aircraft; and

(b) A maintenance record entry has been made as required by the agency approved maintenance procedures.

(2) Each agency should establish procedures to ensure that no person (other than a crewmember) is carried in an aircraft that has been maintained, rebuilt, or altered in a manner that may have appreciably changed its flight characteristics or substantially affected its operation in flight until an appropriately rated pilot, as designated by the agency, flies the aircraft, makes an operational check of the maintenance performed or alteration made and logs the flight in the aircraft records. The aircraft does not have to have the flight check if ground tests, inspection, or both show conclusively that the maintenance, preventative maintenance, rebuilding, or alteration has not appreciably changed the flight characteristics or substantially affected the flight operations of the aircraft.

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CHAPTER XI. MAINTENANCE

2. MINIMUM EQUIPMENT LIST (MEL)

A. GENERAL

The MEL is intended to permit operations with inoperative items of equipment for a period of time until repairs or replacement can be accomplished. It is important that repairs be accomplished at the earliest opportunity. In order to maintain an acceptable level of safety and reliability, the MMEL (master minimum equipment list), developed by FAA, establishes limitations on the duration of and conditions for operation with inoperative equipment. When an item of equipment is discovered to be inoperative, it is reported by making an entry in the aircraft maintenance log. The item is then either repaired or may be deferred per the MEL or other approved means acceptable to the agency prior to further operation. MEL conditions and limitations do not relieve the agency prior to further operation. MEL conditions and limitations do not relieve the agency from the responsibility of determining that the aircraft is in condition for safe operation with items of inoperative equipment.

B. AGENCY RESPONSIBILITY

Each operating agency will publish a minimum equipment list for each make and model of aircraft. This minimum equipment list should be developed in accordance with the FAA Master MEL. A special procedures section may be developed by reference to the manufacturer's Dispatch Deviation Guide, if available. This section should identify procedures for both operations and maintenance personnel to follow when operating in accordance with the MEL. Where a MMEL has not been developed by the FAA, each agency should consider developing a similar document to be used for agency aircraft. Such a document should be developed by aircraft make and model.

C. FLIGHT RELEASE

Prior to flight, the pilot in command will ensure that the maintenance status is appropriate for flight and any and all MEL procedures have been accomplished in accordance with the approved MEL.

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3. INSPECTIONS

Agencies must ensure that aircraft inspection programs comply with accepted practices. The sections below describe requirements for annual inspections and for progressive inspection programs.

A. ANNUAL INSPECTIONS

(1) Except as approved by the agency manager of flight operations, no person may operate an aircraft unless it has had an annual inspection within the preceding 12 calendar months in accordance with the agency approved maintenance program. The aircraft must have been returned to service by a person authorized by the agency operating that aircraft and the inspection entered as an "annual" inspection in the required maintenance records.

(2) The above paragraph does not apply to an aircraft that carries a special flight permit issued by the agency manager of flight operations.

B. PROGRESSIVE INSPECTIONS

(1) A progressive inspection program is one that is accomplished in lieu of an annual inspection program. A progressive inspection program designed by the operating agency shall provide the following:

(a) An explanation of the progressive inspection, including the continuity of inspection responsibility, the making of reports, and the keeping of records and technical reference material;

(b) An inspection schedule, specifying the intervals in hours or days and including instructions for exceeding an inspection interval by not more than 10 hours while enroute and for changing an inspection interval because of service experience;

(c) Sample routine and detailed inspection forms and instructions for their use;

(d) Sample reports and records and instructions for their use;

(e) Enough housing and equipment for necessary disassembly and proper inspection of the aircraft; and

(f) Appropriate current technical information for the aircraft. The frequency and detail of the progressive inspection shall provide for the complete inspection of the aircraft within each 12 calendar months and be consistent with the manufacturer's recommendations, field service experience, and the kind of operation in which the aircraft is engaged. The progressive inspection schedule must ensure that the aircraft will be airworthy at all times.

C. CHANGES TO INSPECTION PROGRAMS

Whenever the agency finds that revisions to an aircraft inspection program are necessary for continued adequacy of the program, the agency may make changes as approved by the agency manager of flight operations and recommended by the aircraft manufacturer.

CHAPTER XI. MAINTENANCE

4. PILOT IN COMMAND RESPONSIBILITIES

The pilot in command's responsibility for the condition of the aircraft begins prior to flight, continues through any intermediate stops, and does not end until the termination of the flight.

A. AIRCRAFT PREFLIGHT

(1) Prior to flight, the pilot in command should ensure that the aircraft receives a thorough preflight inspection. This preflight inspection may be conducted by the pilot in command or his designated representative. The inspection should include, but not be limited to:

(a) A walk-around inspection of the aircraft, covering basic safety items.

(b) A systems preflight as specified by the manufacturer and the operating agency.

(c) A review of the aircraft maintenance log to ensure that any required maintenance action has been completed or any inoperative component has been handled in accordance with established minimum equipment list (MEL) procedures.

B. INTERMEDIATE STOPS

(1) The pilot in command will ensure that all mechanical irregularities occurring during flight are entered in the maintenance log. If maintenance or MEL procedures are required, the pilot in command will coordinate with the home base or local maintenance personnel to assure the required procedures are accomplished.

CHAPTER XI. MAINTENANCE

C. TERMINATION

(1) The pilot in command will ensure any and all mechanical irregularities occurring during the flight are entered in the aircraft maintenance log. If local maintenance personnel are on duty, the pilot on command should brief them on any irregularities discovered.

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CHAPTER XII. AIRCRAFT SERVICING PROCEDURES

Suggest text similar to the following:

1. SERVICING OF AIRCRAFT

A. GENERAL

When fuel, oil or other ramp services are provided by agency maintenance personnel or qualified personnel under contract with the agency to provide maintenance on the aircraft, the maintenance supervisor shall ensure adherence to all safety precautions. When services are not provided by agency or contract personnel, the PIC or a designated crewmember is responsible to ensure that the services are preformed in accordance with appropriate directives and safety precautions.

B. FUELING

(1) During fueling the following safety precautions shall be observed:

(a) Correct type and grade of fuel shall be verified prior to fueling.

(b) Fueling shall be accomplished in accordance with the appropriate aircraft maintenance manuals. It shall be accomplished outdoors and at least 50 feet away from flammable and potentially hazardous equipment and materials which could create open sparks. This includes but is not limited to, battery chargers, electric tools and equipment, matches, open flame etc.

(c) Fuel shall be checked for the presence of water or contamination.

(d) The aircraft, fuel truck or pit, and fuel nozzle shall be grounded.

(e) Ensure that fire extinguishing equipment is available during the fueling process.

(f) Electrical switches shall not be operated during fueling unless required by the fueling process. Non-essential electrical equipment shall be turned off and not energized until fueling is completed. Essential electrical equipment shall remain on and not be de-energized until fueling is completed.

(g) Fueling shall not be accomplished within 100 feet of energized airborne radar equipment or 300 feet of energized ground radar equipment.

(h) Operation of an auxiliary power unit while fueling shall be in accordance with the appropriate aircraft/equipment manuals.

(i) No passengers shall be on board while fueling is in progress.

(j) Smoking shall be prohibited aboard and within 100 feet of the aircraft.

(k) Oxygen shall not be serviced while fueling is in progress.

(l) Fueling during thunderstorms may be performed with extreme caution and avoided whenever possible.

(m) Night fueling shall be accomplished with adequate lighting. Flashlights, when used, shall be of the vapor proof type, approved by Underwriter's Laboratories for use in hazardous locations.

(n) Fuel quantity shall be verified upon completion of fueling.

C. OIL SERVICING

Oil quantity and type shall be in accordance with appropriate aircraft manuals.

CHAPTER XII. AIRCRAFT SERVICING PROCEDURES

D. SEASONAL/OCCASIONAL CHARGES

Seasonal and occasional charges listed below shall be authorized at the discretion of the PIC.

(1) tiedowns/hangering.

(2) deicing/preheat.

(3) oxygen.

(4) lavatory servicing.

(5) landing fees.

E. OTHER AIRCRAFT SERVICING

All other servicing, prior to being performed, shall be coordinated with the Chief Pilot.

CHAPTER XII. AIRCRAFT SERVICING PROCEDURES

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CHAPTER XII. AIRCRAFT SERVICING PROCEDURES

2. PAYMENT FOR SERVICES

A. GENERAL

(1) The PIC shall be responsible for, and/or designate a crewmember to sign, all payments for services.

(a) Payment for services shall be by:

1 Government credit cards.

a U.S. Government National Credit Card. Blue and white card - for aviation fuel and lubricating oils and fluid purchases from commercial vendors not listed in the current contract listing.

b DOD USA Fuel Identiplate. White/Blue cards - for jet fuel purchases from vendors who have a current contract. PIC shall insure the vendor uses the long DOD credit card slip and the DOD imprinter. This card may only be used for fuel, Petroleum base jet engine oil, or Synthetic base jet engine oil.

c U.S. Government Visa Card. Used for all other purchases.

(2) Taxes

(a) Federal excise tax shall be included in the supplier's billing. **Do not sign any FBO form which does not show federal excise tax being charged.**

(b) Request exemption from state and local sales taxes. If the vendor refuses, pay the entire amount.

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CHAPTER XIII. FLIGHT TIME LIMITATIONS

1. FLIGHTCREW DUTY TIME LIMITS

Suggest text similar to the following:

A. QUARTERLY AND ANNUAL FLIGHT TIME

The agency shall not assign nor shall any crewmember accept an assignment for flight time as a crewmember if that crewmember's total flight time in all commercial/military flying will exceed:

(1) 300 hours in any calendar quarter.

(2) 500 hours in any two consecutive calendar quarters.

(3) 1,000 hours in any calendar year.

B. CREW DUTY TIME

Total crew duty time shall not be scheduled to exceed 12 hours in any 24 hour period.

C. DAILY FLIGHT TIME

Total flight time including all commercial and military flight time shall not exceed 10 hours in any 24 consecutive hours.

D. REQUIRED REST PERIODS

(1) Crew rest time starts, when on TDY away from home station, when duties at the airport have been completed. This time does not include local transportation time. Crew rest time ends when crew duty time begins.

(2) Prior to scheduled flight a minimum of 10 consecutive hours of rest shall be provided during the 24 hour period that precedes the planned completion time of the scheduled flight.

E. PERMISSIBLE EXCEPTIONS

(1) Required Rest for Exception

(a) When a crewmember's flight time has exceeded a daily flight time limitation, due to circumstances beyond the crewmember's or agency control (such as adverse weather conditions). The agency shall not assign nor shall any crewmember accept an assignment for flight time as a crewmember until that crewmember has been provided a rest period of at least:

(b) 12 consecutive hours for exceeding the limitation by less than 60 minutes.

(c) 16 consecutive hours for exceeding the limitation by more than 60 minutes.

(2) Required Daily Rest

The Agency shall provide each flight crewmember at least 13 rest periods of at least 24 consecutive hours each, in each calendar quarter.

F. FLIGHTCREW RESPONSIBILITY

(1) The PIC will determine the crew duty day. While on TDY away from home station, the crew duty day starts at the specified time that the PIC directs the crewmembers to be at the duty location and the crew duty day ends when the crewmembers leave the duty location.

G. PROCEDURE FOR RECORDING TIME

Flight time will be recorded on the Agency Flight Record. The passenger, flight and crew data, including flight time and rental data, shall be completed daily by the PIC and processed immediately upon completion of the flight to the responsible approving office or operating activity. A copy shall be forwarded to the Chief Pilot within 3 working days.

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CHAPTER XIV. SCHEDULING

1. SCHEDULING PROCEDURES

Suggest text similar to the following:

A. GENERAL

Effective scheduling of resources and task accomplishments is one of the most critical and complex aspects of the agency flight mission. Aircraft availability and time must be carefully balanced with flight inspection and procedures requirements, aircrew qualifications, training/evaluation, and aircraft maintenance.

B. BASIC FLIGHT SCHEDULE

(1) The long range flight schedule is a plan covering a one year period which identifies proposed crewmember assignments by weeks, as applicable.

(2) A continuous 90 day forecast flying schedule shall be posted to be updated weekly, as applicable.

(3) Specific crewmember assignments to the flight schedule shall be posted at least fourteen days prior to the flight date.

(4) The Chief of Scheduling shall ensure all crewmembers are legal to act on the assigned mission.

(5) Any change to the flight schedule shall be made in a readily identifiable manner and promptly posted. Any changes must be coordinated with the affected crewmember(s).

(6) Exchange of schedule assignments by personnel, of equal qualifications and/or certification, requires approval by the Chief of Scheduling or designated representative. Exchange of schedule assignments shall:

(a) be consistent with operational requirements.

(b) not conflict with scheduled training.

(c) be coordinated with the immediate supervisor.

(d) not result in overtime and/or increase in premium pay cost.

(7) Schedules shall be retained on file in accordance with administrative detail documents and be available for review. Any changes to a schedule will be clearly identified, attached to the affected schedule, and retained with the original.

C. DAILY FLIGHT TIME

Total flight time including all commercial and military flight time shall not exceed 10 hours in any 24 consecutive hours.

D. REQUIRED REST PERIODS

(1) Crew rest time starts, when on TDY away from home station, when duties at the airport have been completed. This time does not include local transportation time. Crew rest time ends when crew duty time begins.

(2) Prior to scheduled flight a minimum of 10 consecutive hours of rest shall be provided during the 24 hour period that precedes the planned completion time of the scheduled flight.

E. PERMISSIBLE EXCEPTIONS

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(a) When a crewmember's flight time has exceeded a daily flight time limitation, due to circumstances beyond the crewmember's or agency control (such as adverse weather conditions). The agency shall not assign nor shall any crewmember accept an assignment for flight time as a crewmember until that crewmember has been provided a rest period of at least:

(b) 12 consecutive hours for exceeding the limitation by less than 60 minutes.

(c) 16 consecutive hours for exceeding the limitation by more than 60 minutes.

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F. FLIGHTCREW RESPONSIBILITY

(1) The PIC will determine the crew duty day. While on TDY away from home station, the crew duty day starts at the specified time that the PIC directs the crewmembers to be at the duty location and the crew duty day ends when the crewmembers leave the duty location.

CHAPTER XIV. SCHEDULING

G. PROCEDURE FOR RECORDING TIME

Flight time will be recorded on the Agency Flight Record. The passenger, flight and crew data, including flight time and rental data, shall be completed daily by the PIC and processed immediately upon completion of the flight to the responsible approving office or operating activity. A copy shall be forwarded to the Chief Pilot within 3 working days.

CHAPTER XIV. SCHEDULING

2. AIRCREW SCHEDULING

A. CHIEF OF SCHEDULING ACTIONS

(1) Publish the annual and the 90 day forecast flying schedule, as applicable. Specify duty, ie; travel, training, evaluation, school, leave, etc. The schedule shall be updated at the beginning of each month as changes occur.

(2) Coordinate changes affecting the forthcoming 30-day period with the crewmember(s) involved.

(3) Post permanent assignments to the flight schedule no less than 14 days prior to the flight date. Supervisory personnel should make every effort to maintain the posted schedule.

(4) Review monthly the ADP flying hour summary of all assigned crewmembers for distribution of flying time and to ensure that the flight time meets the recent flight experience and rest requirements of the agency.

(5) Coordinate flightcrew/aircraft shortfalls. If unable to accomplish the flight inspection workload, determine if support can be obtained with alternate assets or from other locations. Upon exercising this option, the Chief of Scheduling will:

(a) Assure that the option is documented to include reason for action and estimated impact, ie; delays incurred, additional cost, if any, etc.

(b) Assure all information is made available to the augmented crewmembers or alternate office to support the mission. Where the situation results in an augmented flightcrew, sufficient time must be allowed for the flightcrew to complete any preflight actions or briefings necessary to effectively perform the mission assigned.

(6) Assure all crewmembers assigned to the flying schedule meet all requirements as outlined and directed in chapters IV and XIII of this Manual.

B. CREWMEMBER ACTIONS

(1) Provide their supervisors with anticipated absences due to leave, training, and/or other reasons for non-availability for flying, at least 30 days prior to the date of a scheduled flight.

NOTE: Non-emergency changes will be kept to a minimum in the four weeks prior to the occurrence. Non-emergency removal from the flying schedule should not be approved in the two weeks prior to scheduled TDY or local flying. This will not preclude a coordinated exchange of scheduled flying duties.

(2) Notify supervisors as soon as possible of any unforecast or emergency type changes that affect availability for the flying schedule.

(3) Notify their supervisors if the forecast flying or training schedule will cause conflict with applicable parts of this Manual.

CHAPTER XIV. SCHEDULING

3. AGENCY MISSION SCHEDULING

A. GENERAL

(1) All agency mission scheduling will be consistent with the policy and procedural guidance contained in this manual. All flights shall be approved by the Manager of Flight Operations.

(2) ADP is the basis for effective scheduling of assigned aircraft, mission/flight documentation, and maintenance of facility data.

(3) The scheduling of fleet aircraft and the responsibilities of individuals/functions to support the agency mission are listed in B and C below:

B. DIRECTOR OF OPERATIONS

(1) Coordinate, prepare, amend, and complete all required documentation to support the schedule.

(2) Be knowledgeable of CADP as an agency mission management tool. This shall include extracting and entering the necessary data for daily flight operations of aircraft and flightcrews.

(3) Extract from the ADP the 30-day workload projection schedule of periodic work which will become due within the next 60-day period and an ADP flight check master report.

(4) Accept, document and schedule "Special", (non-routine) type agency flight request.

(5) Be responsible for the receipt and posting of the facility workload scheduling strips. Upon receipt:

(a) The strips will be compared with the ADP workload projection for duplicate information, work issue, correct flight mission due date information, work previously accomplished, or requirements deletion. Initiate and coordinate corrections as required. This shall be accomplished within 5 working days after receipt of issue.

(b) Post the data strips in a prominent location. Note any unique requirements or additional information necessary to support mission scheduling.

(6) Publish, distribute and file weekly workload schedules. The proposed scheduled workload will:

(a) Be predicated on recurring and "Special" flight mission request/requirements, prioritized accordingly, with consideration for geographic proximity.

(b) Incorporate the workload to accomplish "Special" (non-routine) flight requests in conjunction with a weekly flight schedule when conditions permit.

NOTE: Proposed schedule will be reviewed by the Chief Pilot, Chief of Scheduling and Chief of Maintenance or designated representatives and approved prior to posting. The review and approval shall be accomplished by the Manager of Flight Operations.

(7) Coordinate with aircraft/avionics maintenance to confirm the availability of scheduled aircraft.

(8) Enter agency flight information into ADP as soon as practical following receipt from the flightcrew. This should not be later than 3 working days after receipt.

C. FLIGHTCREW RESPONSIBILITIES

The PIC (SIC as directed) shall:

(1) Confirm the assigned flight schedule is complete, accurate and any changes have been fully coordinated.

(2) Coordinate the weekly schedule to accomplish the assigned workload, consistent with prioritization of inspection requirements. Brief other crewmembers as required.

(3) When establishing an itinerary, amend scheduled workload as required, with respect to type inspections and priorities. Coordinate all deviations with the flight scheduling section.

NOTE: Deviations should be kept to a minimum. When deemed necessary or prudent, it shall be the decision of the PIC to amend the schedule and/or to continue the mission. The flightcrew will be fully informed of any changes. If the duty time for the next day is to change, the PIC shall notify the crew of the new duty time prior to the end of day before the date of the change.

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CHAPTER XV. HAZARDOUS MATERIALS

Suggest text similar to the following:

1. GENERAL

A. DEFINITION OF HAZARDOUS MATERIAL

Means a substance or material which has been determined by the U.S. Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated in CFR Title 49 Parts 100-177.

B. AUTHORITY TO TRANSPORT

The Agency will not accept hazardous materials for shipment aboard any aircraft except those exempted by CFR 49, Part 175.10 including:

(1) The Agency will accept shipments (cargo) containing carbon dioxide, solid (dry ice) provided the package is clearly marked with the name of the contents being cooled, the net weight of the dry ice or an indication that the net weight is 5 pounds or less, and also marked "Carbon Dioxide, Solid" or "Dry Ice."

(2) The Agency will permit packages containing dry ice in quantities not exceeding 4 pounds per passenger when used to pack perishables in carry-on baggage.

(3) Packages containing dry ice must be designed to prevent a build-up of pressure that could rupture the packaging.

(4) Current copies of CFR 49 are available for reference.

(5) Agency personnel are responsible for screening of all shipments, cargo, freight, etc., to prevent the carriage of hazardous materials as specified in CFR 49.

(6) The individual, who loads specifically exempted materials listed in CFR 49, Part 175.10, will be responsible for notifying the PIC in writing that the exempted material is carried on board the aircraft.

(7) A copy of the written notification required in the preceding paragraph must accompany the shipment it covers during transportation aboard the aircraft.

C. MANAGEMENT RESPONSIBILITY

The Manager of Flight Operations shall ensure that each crewmember is adequately trained to recognize those items classified as hazardous materials.

D. HAZARDOUS MATERIALS CLASSIFICATIONS

For the purposes of this chapter hazardous materials shall include any item classified as:

(1) hazardous materials (HM).

(2) hazardous substances.

(3) dangerous materials.

(4) dangerous goods.

(5) regulated materials.

(6) restricted articles.

E. HAZARDOUS MATERIAL COMMON ITEMS

Common items which are in the HM category include but are not limited to:

(1) Strike anywhere matches

(2) Gasoline

(3) Paints

(4) Lighter fluid

(5) Lighters with flammable liquid reservoirs

(6) Fireworks

(7) Tear gas/Mace

(8) Radio-pharmaceuticals

(9) Fish meal

(10) Celluloid film

(11) Batteries

(12) Compressed gas.

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CHAPTER XV. HAZARDOUS MATERIALS

2. HAZMAT HANDLING

A. HANDLING OF BAGGAGE, CARGO AND PACKAGES CONTAINING HAZARDOUS MATERIALS

(1) The general transportation requirements of CFR 49, states that persons presenting HM for transportation must properly declare any such material at the time it is delivered for transportation. It is an acceptable practice to assume that items containing HM may be recognized by their conspicuous markings and labels, which are required to be displayed upon the outside of the package. The shipper's presentation of the proper papers and certification must be part of the request for transportation and accompany the HM during transportation.

(2) Many persons presenting items for transportation may not be aware of the Federal requirements for transporting HM and may not know that they are shipping items which are classified as HM. Personnel accepting baggage, cargo and packages for transportation must be vigilant in scanning all items. They should question persons presenting items as to the contents, to prevent inadvertent transportation of HM.

CHAPTER XV. HAZARDOUS MATERIALS

B. HAZARDOUS MATERIALS LABELS

(1) International Labeling

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(2) Domestic Labeling

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(3) Domestic Placarding

CHAPTER XV. HAZARDOUS MATERIALS

3. TRAINING

A. TRAINING REQUIRED

Training for recognition and handling will be given to each person who may be connected with the acceptance for shipment of hazardous material (i.e., maintenance, and flight crewmembers). This training will consist of initial and recurrent segments as outlined in the training manual, and will be conducted at the direction of the Manager. This training will be scheduled by Training and Standardization, AVS-67, and coordinated with the Manager.

B. TRAINING FREQUENCY

Each employee involved shall receive recurrent training every 12 months in the procedures for recognizing hazardous materials and the reporting of incidents involving such materials.

CHAPTER XV. HAZARDOUS MATERIALS

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CHAPTER XV. HAZARDOUS MATERIALS

4. REQUIRED REPORTS

A. DISCREPANCIES

(1) A discrepancy is an occurrence involving hazardous materials which are improperly described, certified, labeled, marked or packaged including:

(a) baggage, cargo or packages found to contain HM after being accepted as a non-hazardous shipment.

(b) shipments which contain HM:

1 Other than described or certified.

2 in quantities exceeding authorization.

3 in unauthorized containers or with improper closures.

4 in inside containers which are not oriented in accordance with outer markings.

5 with insufficient or improper absorption materials, when required.

(2) Any person who discovers a discrepancy as listed above shall, as soon as practicable, notify the Manage of Flight Operations providing the following information:

(a) Name and telephone number of the person reporting the discrepancy.

(b) Specific location of the shipment concerned.

(c) Name of shipper.

(d) Nature of the discrepancy.

(3) The Manager of Flight Operations upon receiving notification of a discrepancy, shall notify the FAA Civil Aviation Security Field Office nearest the scene of the discrepancy.

B. INCIDENTS

(1) An incident is an event, including accident, discharge, or spillage, which occurs as a direct result of transporting (including loading, unloading or temporarily storing) hazardous materials, which:

(a) results in a death.

(b) causes injuries requiring hospitalization.

(c) causes $50,000 estimated property damage.

(d) causes an evacuation of the general public lasting one or more hours.

(e) causes one or more major transportation arteries or facilities to close or shut down for one hour or more.

(f) requires an aircraft to alter it's operational flight pattern or routine.

(g) results in fire, breakage, or spillage.

(h) generates suspected contamination from a shipment of radioactive material or etiologic agents.

(i) in the judgement of a person at the scene a situation of such a nature exists that it should be reported even though it does not meet the criteria listed above.

(2) Any person who has knowledge of an incident as listed above shall, as soon as practicable, notify the Manager of Flight Operations providing the following information:

(a) Name and telephone number of the person reporting the incident.
(b) Date, time and location of the incident.
(c) The extent of injuries, if any.
(d) The classification, name and quantity of hazardous material involved in the incident, if such information is available.
(e) Type of incident and nature of HM involvement.
(f) Whether or not a continuing danger to life exists at the scene, if such can be reasonably ascertained.

(3) The Manager of Flight Operations upon receiving notification of an incident, shall notify:

(a) The FAA Civil Aviation Security Field Office nearest the scene of the incident.
(b) The Department of Transportation at 1-800-424-8802. If etiologic material is involved see (d) below.
(c) The shipper if radioactive material is involved.
(d) The Center for Disease Control/Atlanta 1-404-633-5313 or 1-202-267-2675 if etiologic material is involved.

(4) The Manager of Flight Operations shall ensure DOT Form F 5800.1, Department of Transportation Hazardous Materials Incident Report is:

(a) completed by personnel who where at the scene of the incident as soon as practicable but no later than 30 days from the date of the incident.

(b) forwarded, in duplicate, to the Materials Transportation Bureau, Information Systems Manager, Department of Transportation, Washington, DC 20590-0001, with an additional copy furnished to the FAA Civil Aviation Security Field Office which received initial notification of the incident.

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CHAPTER XVI. FLIGHT SAFETY PROGRAM

1. MANAGEMENT RESPONSIBILITIES

A. CHIEF OF SAFETY

(1) Suggest this position be charged with conducting a safety program for all Agency Operations and Maintenance personnel.

(2) Suggest a list of duties of this position be included in the text.

(3) Suggest this position establish a system for hazard elimination.

(4) Suggest this position establish a training program for Operation and Maintenance personnel.

B. CHIEF PILOT

(1) Suggest this position be advisor to the Chief of Safety

(2) Suggest this position control hazard elimination documentation.

C. CHIEF OF MAINTENANCE

(1) (Same as in B)

(2) (Same as in B)

CHAPTER XVI. FLIGHT SAFETY PROGRAM

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CHAPTER XVI. FLIGHT SAFETY PROGRAM

2. FLIGHT SAFETY CLIMATE

A. GENERAL

(1) Suggest the Chief of Safety take action necessary to develop a safety awareness attitude in the Operations and Maintenance groups.

(2) Suggest the Chief of Safety schedule meetings with Operations and Maintenance groups and present Safety Training materials from other organization.

CHAPTER XVI. FLIGHT SAFETY PROGRAM

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CHAPTER XVI. FLIGHT SAFETY PROGRAM

3. HAZARD INVESTIGATION AND ELIMINATION

A. REPORTING HAZARDS

(1) Suggest a method be established to report hazards. Including a formal document to be routed to higher authority.

(2) Suggest a formal system for accounting for hazard reports and actions taken.

B. HAZARD ELIMINATION

(1) Suggest a method and report the established to show elimination of hazards.

CHAPTER XVI. FLIGHT SAFETY PROGRAM

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CHAPTER XVI. FLIGHT SAFETY PROGRAM

4. SAFETY EDUCATION AND AWARENESS

A. SAFETY TRAINING

(1) Suggest a training program be described for all affected personnel.

B. SAFETY MEETINGS

Suggest periodic scheduled safety meetings be held to review safety problems.

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APPENDIX A. APPLICABLE FEDERAL AVIATION REGULATIONS (FARs)

1. GENERAL PROCEDURES

A. GENERAL

This chapter provides excerpts from Federal Aviation Regulations (FARs) that apply to the operation of agency aircraft. The FARs are listed in numerical order.

The regulations in this chapter have been included in the manual to serve as a reference for all personnel associated with the operation of agency aircraft. Each operating agency may further supplement this chapter with other FARs appropriate to its operations.

Each paragraph is identified by the FAR Part number and paragraph number. For example, 91.3, Responsibility and Authority of the Pilot in Command, refers to 14 Code of Federal Regulations (CFR) Part 91, paragraph 91.3. This paragraph contains the rules governing the responsibility and authority of the pilot in command of an aircraft. The FARs in this chapter are current and correct as of January 1, 1991.

B. FEDERAL AVIATION REGULATION PART 91, GENERAL OPERATING AND FLIGHT RULES

The following section provides Federal Aviation Regulations found in 14 CFR, Part 91 that apply to the operation of agency aircraft.

(1) Responsibility and Authority of the Pilot in Command - 91.3

(a) The pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft.

(b) In an in-flight emergency requiring immediate action, the pilot in command may deviate from any rule of this part to the extent required to meet that emergency.

(c) Each pilot in command who deviates from rule under paragraph (b) of this section shall, upon the request of the Administrator, send a written report of that deviation to the Administrator.

(2) Civil Aircraft Airworthiness - 91.7

(a) No person may operate a civil aircraft unless it is in an airworthy condition.

(b) The pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when unairworthy mechanical, electrical, or structural conditions occur.

(3) Civil Aircraft Flight Manual, Marking, and Placard Requirements - 91.9

(a) Except as provided in paragraph (d) of this section, no person may operate a civil aircraft without complying with the operating limitations specified in the approved Airplane or Rotorcraft Flight Manual, markings, and placards, or as otherwise prescribed by the certificating authority of the country of registry.

(b) No person may operate a U.U.-registered civil aircraft

1 For which an Airplane or Rotorcraft Flight Manual is required by Section 21.5 of this chapter unless there is available in the aircraft a current, approved Airplane or Rotorcraft Flight Manual or the manual provided for in section 121.141(b); and

2 For which an Airplane or Rotorcraft Flight Manual is not required by Section 21.5 of this chapter, unless there is available in the aircraft a current approved manual material, markings, and placards, or any combination thereof.

(c) No person may operate a U.S. registered civil aircraft unless that aircraft is identified in accordance with Part 45 of this chapter.

(d) Any person taking off or landing a helicopter certified under Part 29 of this chapter at a heliport constructed over water may make such momentary flight as is necessary for takeoff or landing through the prohibited range of the limiting height-speed envelope established for that helicopter if that flight through the prohibited range takes place over water on which a safe ditching can be accomplished and if the helicopter is amphibious or is equipped with floats or other emergency flotation gear adequate to accomplish a safe emergency ditching on open water.

(4) Prohibition Against Interference With Crewmembers - 91.11

(a) No person may assault, threaten, intimidate, or interfere with a crewmember in the performance of the crewmember's duties aboard an aircraft being operated.

(5) Careless or Reckless Operation - 91.13

(a) Aircraft Operations for the Purpose of Air Navigation. No person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another.

(b) Aircraft Operations Other Than for the Purpose of Air Navigation. No person may operate an aircraft, other than for the purpose of air navigation, on any part of the surface of an airport used by aircraft for air commerce (including areas used by those aircraft for receiving or discharging persons or cargo), in a careless or reckless manner so as to endanger the life or property of another.

(6) Dropping Objects - 91.15

No pilot in command of a civil aircraft may allow any object to be dropped from that aircraft in flight that creates a hazard to persons or property. However, this section does not prohibit the dropping of any object if reasonable precautions are taken to avoid injury or damage to persons or property.

(7) Alcohol or Drugs - 91.17

(a) No person may act or attempt to act as a crewmember of a civil aircraft.

1 Within 8 hours after the consumption of any alcoholic beverage;
2 While under the influence of alcohol;
3 While using any drug that affects the person's faculties in any way contrary to safety; or

(b) Except in an emergency, no pilot of a civil aircraft may allow a person who appears to be intoxicated or who demonstrates by manner or physical indications that the individual is under the influence of drugs (except a medical patient under proper care) to be carried in that aircraft.

(c) A crewmember shall do the following:

1 On request of a law enforcement officer, submit to a test to indicate the percentage by weight of alcohol in the blood, when

a The law enforcement officer is authorized under State or local law to conduct the test or to have the test conducted; and

b The law enforcement officer is requesting submission to the test to investigate a suspected violation of State or local law governing the same or substantially similar conduct prohibited by paragraph (a)1(a)2, or (a)4 of this section.

2 Whenever the Administrator has a reasonable basis to believe that a person may have violated paragraph (a)1(a)2, or (a)4 of this section, that person shall, upon request by the Administrator, furnish the Administrator, the results of each test taken within 4 hours after acting or attempting to act as a crewmember that indicates percentage by weight of alcohol in the blood.

(d) Whenever the Administrator has a reasonable basis to believe that a person may have violated paragraph (a)3 this section, that person shall, upon request by the Administrator, furnish the Administrator, or authorize any clinic, hospital, doctor, or other person to release to the Administrator, the results of each test taken within 4 hours after acting or attempting to act as a crewmember that indicates the presence of any drugs in the body.

(e) Any test information obtained by the Administrator under paragraph (c) or (d) of this section may be evaluated in determining a person's qualifications for any airman certificate or possible violations of this chapter and may be used as evidence in any legal proceeding under Section 602, 609, or 901 of the Federal Aviation Act of 1958.

(8) Portable Electronic Devices - 91.21

(a) Except as provided in paragraph (b) of this section, no person may operate, nor may any operator or pilot in command of an aircraft allow the operation of, any portable electronic device on any of the following U.S. registered civil aircraft:

1 Aircraft operated by a holder of an air carrier operating certificate or an operating certificate; or
2 Any other aircraft while it is operated under IFR.

(b) Paragraph (a) of this section does not apply to

1 Portable voice recorders;
2 Hearing aids;
3 Heart pacemakers;
4 Electric shavers; or
5 Any other portable electronic device that the operator of the aircraft has determined will not cause interference with the navigation or communication system of the aircraft on which it is to be used.

(c) In the case of an aircraft operated by a holder of an air carrier operating certificate or an operating certificate, the determination required by paragraph (b)5 of this section shall be made by that operator of the aircraft on which the particular device is to be used. In the case of other aircraft, the determination may be made by the pilot in command or other operator of the aircraft.

(9) Aviation Safety Reporting Program: Prohibition Against Use of Reports for Enforcement Purposes - 91.25

The Administrator of the FAA will not use reports submitted to the National Aeronautics and Space Administration under the Aviation Safety Reporting Program (or information derived therefrom) in any enforcement action, except information concerning accidents or criminal offenses which are wholly excluded from the Program.

(10) Preflight Action - 91.103

Each pilot in command shall, before beginning a flight, become familiar with all available information concerning that flight. This information must include

(a) For a flight under IFR or a flight not in the vicinity of an airport, weather reports and forecasts, fuel requirements, alternatives available if the planned flight cannot be completed, and any known traffic delays of which the pilot in command has been advised by ATC;

(b) For any flight, runway lengths at airports of intended use, and the following takeoff and landing distance information:

1 For civil aircraft which an approved Airplane or Rotorcraft Flight Manual containing takeoff and landing distance data is required, the takeoff and landing distance data contained therein; and

2 For civil aircraft other than those specified in paragraph (b)(1) of this section, other reliable information appropriate to the aircraft, relating to aircraft performance under expected values of airport elevation and runway slope, aircraft gross weight, and wind and temperature.

(11) Flight Crewmembers at Stations - 91.105

(a) During takeoff and landing, and while en route, each required flight crewmember shall

1 Be at the crewmember station unless the absence is necessary to perform duties in connection with the operation of the aircraft or in connection with physiological needs; and

2 Keep the safety belt fastened while at the crewmember station.

(b) Each required flight crewmember of a U.S. registered civil airplane shall, during takeoff and landing, keep the shoulder harness fastened while at the crewmember station. This paragraph does not apply if

1 The seat at the crewmember's station is not equipped with a shoulder harness; or

2 The crewmember would be unable to perform required duties with the should harness fastened.

(12) Right of Way Rules: Except Water Operations - 91.113

(a) Inapplicability. This section does not apply to the operation of an aircraft on water.

(b) General. When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft. When a rule of this section give another aircraft the right-of-way, the pilot shall give way to that aircraft and may not pass over, under, or ahead of it unless well clear.

(c) In Distress. An aircraft in distress has the right-of-way over all other air traffic.

(d) Converging. When aircraft of the same category are converging at approximately the same altitude (except head-on, or nearly so), the aircraft to the other's right has the right-of-way. If the aircraft are of different categories

1 A balloon has the right-of-way over any other category of aircraft;
2 A glider has the right-of-way over an airship, airplane, or rotorcraft; and
3 An airship has the right-of-way over an airplane or rotorcraft.

However, an aircraft towing or refueling other aircraft has the right-of-way over all other engine-driven aircraft.

(e) Approaching Head-On. When aircraft are approaching each other head-on, or nearly so, each pilot of each aircraft shall alter course to the right.

(f) Overtaking. Each aircraft that is being overtaken has the right-of-way and each pilot of an overtaking aircraft shall alter course to the right to pass well clear.

(g) Landing. Aircraft, while on final approach, or while landing, have the right-of-way over other aircraft in flight or operating on the surface, except that they shall not take advantage of this rule to force an aircraft off the runway surface which has already landed and is attempting to make way for an aircraft on final approach. When two or more aircraft are approaching an airport for the purpose of landing the aircraft at the lower altitude has the right-of-way, but it shall not take advantage of this rule to cut in front of another which is on final approach to land or to overtake that aircraft.

(13) Right of Way Rules; Water Operations - 91.115

(a) General. Each person operating an aircraft on the water shall, insofar as possible, keep clear of all vessels and avoid impeding their navigation, and shall give way to any vessel or other aircraft that is given the right-of-way by any rule of this section.

(b) Crossing. When aircraft, or an aircraft and a vessel, are on crossing courses, the aircraft or vessel to the other's right has the right-of-way.

(c) Approaching Head On. When aircraft, or an aircraft and a vessel, are approaching head-on, or nearly so, each shall alter its course to the right to keep well clear.

(d) Overtaking. Each aircraft or vessel that is being overtaken has the right-of-way, and the one overtaking shall alter course to keep well clear.

(e) Special Circumstances. When aircraft, or an aircraft and a vessel, approach so as to involve risk of collision, each aircraft or vessel shall proceed with careful regard to existing circumstances, including the limitations of the respective craft.

(14) Aircraft Speed - 91.117

(a) Unless otherwise authorized by the Administrator, no person may operate an aircraft below 10,000 feet MSL at an indicated airspeed of more than 250 knots (288 m.p.h.).

(b) Unless otherwise authorized or required by ATC, no person may operate an aircraft within an airport traffic area at an indicated airspeed of more than 200 knots (230 m.p.h.). This paragraph (b) does not apply to any operations within a terminal control area. Such operations shall comply with paragraph (a) of this section.

(c) No person may operate an aircraft in the airspace underlying a terminal control area, or in a VFR corridor designated through a terminal control area, at an indicated airspeed of more than 200 knots (230 m.p.h.).

(d) If the minimum safe airspeed for any particular operation is greater than the maximum speed prescribed in this section, the aircraft may be operated at that minimum speed.

(15) Minimum Safe Altitudes: General - 91.119

Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

(a) Anywhere. An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.

(b) Over Congested Areas. Over any congested are of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.

(c) Over Other than Congested Areas. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

(d) Helicopters. Helicopters may be operated at less than the minimums prescribed in paragraph (b) or (c) of this section if the operation is conducted without hazard to persons or property on the surface. In addition, each person operating a helicopter shall comply with any routes or altitudes specifically prescribed for helicopters by the Administrator.

(16) Altimeter Settings - 91.121

(a) Each person operating an aircraft shall maintain the cruising altitude or flight level of that aircraft, as the case may be, by reference to an altimeter that is set when operating

1 Below 18,00 feet MSL, to

a The current reported altimeter setting of a station along the route and within 100 nautical miles of the aircraft;

b There is no station within the are prescribed in paragraph (a)1a of this section, the current reported altimeter setting of an appropriate available station; or

c In the case of an aircraft not equipped with a radio, the elevation of the departure airport or an appropriate altimeter setting available before departure; or

2 At or above 18,000 feet MSL, to 29.92" Hg.

(b) The lowest usable flight level is determined by the atmospheric pressure in the area of operation as shown in the following table:

Current Altimeter Setting	Lowest Usable Flight Level
29.92 (or higher)	180
29.91 through 29.42	185
29.41 through 28.92	190
28.91 through 28.42	195
28.41 through 27.92	200
27.91 through 27.42	205
27.41 through 26.92	210

(c) To convert minimum altitude prescribed under sections 91.119 and 91.177 to the minimum flight level, the pilot shall take the flight level equivalent of the minimum altitude in feet and add the appropriate number of feet specified below, according to the current reported altimeter setting:

Current Altimeter Setting	Adjustment Factor
29.92 (or higher)	None
29.91 through 29.42	500
29.41 through 28.92	1,000
28.91 through 28.92	1.500
28.41 through 27.92	2,000
27.91 through 27.42	2,500
27.41 through 26.92	3,000

(17) Compliance with ATC Clearances and Instructions - 91.123

(a) When an ATC clearance has been obtained, no pilot in command may deviate from that clearance, except in an emergency, unless an amended clearance is obtained. A pilot in command may cancel an IFR flight plan if that pilot is operating in VFR weather conditions outside of positive controlled airspace. If a pilot is uncertain of the meaning of an ATC clearance, the pilot shall immediately request clarification from ATC.

(b) Except in an emergency, no person may operate an aircraft contrary to an ATC instruction in an area in which air traffic control is exercised.

(c) Each pilot in command who in an emergency deviates from an ATC clearance or instruction shall notify ATC of that deviation as soon as possible.

(d) Each pilot in command who (through not deviating from a rule of this subpart) is given priority by ATC in an emergency, shall submit a detailed report of that emergency within 48 hours to the manager of that ATC facility, if requested by ATC.

(e) Unless otherwise authorized by ATC, no person operating an aircraft may operate that aircraft according to any clearance or instruction that has been issued to the pilot of another for radar air traffic control purposes.

(18) ATC Light Signals - 91.125

ATC light signals have the meaning shown in the following table:

Color and Type of Signal	Meaning With Respect to Aircraft on the Surface	Meaning With Respect to Aircraft in Flight
Steady green	Cleared for takeoff	Cleared to land
Flashing green	Cleared to taxi	Return for landing (to be followed by steady green at proper time)
Steady red	Stop	Given way to other aircraft and continue circling
Flashing red	Taxi clear of runway in use	Airport unsafe do not land
Flashing white	Return to starting point on airport	Not applicable
Alternating red and green	Exercise extreme caution	Exercise extreme caution

(19) Operating on or in the Vicinity of an Airport: General Rules - 91.127

(a) Unless otherwise required by Part 93 of this chapter, each person operating an aircraft on or in the vicinity of an airport shall comply with the requirements of this section and, of applicable, of section 91.129.

(b) Each person operating an aircraft to or from an airport without an operating control tower shall

1 In the case of an airplane approaching to land, make all turns of that airplane to the left unless the airport displays approved light signals or visual markings indicating that turns should be made to the right, in which case the pilot shall make all turns to the right;

2 In the case of a helicopter approaching to land, avoid the flow of fixed wing aircraft; and

3 In the case of an aircraft departing the airport, comply with any traffic patterns established for that airport in part 93.

(c) Unless otherwise authorized or required by ATC, no person may operate an aircraft within an airport traffic area except for the purpose of landing at, or taking off from, an aircraft within that area. ATC authorization may be given as individual approval of specific operations or may be contained in written agreements between airport users and the tower concerned.

(d) Except when necessary for training or certification, the pilot in command of a civil turbojet-powered airplane shall use, as a final landing flap setting, the minimum certificated landing flap setting set forth in the approved performance information in the airplane flight manual for the applicable conditions. However, each pilot in command has the final authority and responsibility for the safe operation of the airplane and may use a different flap setting approved for that airplane if it is necessary in the interest of safety.

(19) Operation at Airports with Operating Control Towers - 91.129

(a) General. Unless otherwise authorized or required by ATC, each person operating an aircraft to, from or on an airport with an operating control tower shall comply with the applicable provisions of this section.

(b) Communications with Control Towers Operated by the United States. No person may, within an airport traffic area, operate an aircraft to, from, or on an airport having a control tower operated by the United States unless two-way radio communications are maintained between that aircraft and the control tower. However, if the aircraft radio fails in flight, the pilot in command may operate that aircraft and land if weather conditions are at or above basic VFR weather minimums, visual contact with the tower is maintained, and a clearance to land is received. If the aircraft radio fails while in flight under IFR, the pilot must comply with section 91.185.

(c) Communications with Other Control Towers. No person may, within an airport traffic area, operate an aircraft to, from, or on an airport having a control tower that is operated by any person other than the United States unless

1 If that aircraft's radio equipment so allows, two-way radio communications are maintained between the aircraft and the tower, or

2 If that aircraft's radio equipment allows only reception from the tower, the pilot has the tower's frequency monitored.

(d) Minimum Altitudes. When operating to an airport with an operating control tower, each pilot of

1 A turbine-powered airplane or a large airplane shall, unless otherwise required by the applicable distance from cloud criteria, enter the airport traffic area at an altitude of at least 1,500 feet above the surface of the airport and maintain at least 1,500 feet within the airport traffic area, including the traffic pattern, until further descent is required for a safe landing;

2 A turbine-powered or a large airplane approaching to land on a runway being served by an ILS, if the airplane is ILS equipped, shall fly that airplane at an altitude at or above the glide slope between the outer marker (or the point of interception with the glide slope, if compliance with the applicable distance from clouds criteria requires interception closer in) and the middle marker; and,

3 An airplane approaching to land on a runway served by a visual approach slope indicator shall maintain an altitude at or above the glide slope until a lower altitude is necessary for a safe landing. However, paragraphs (d)2 and 3 of this section do not prohibit normal bracketing maneuvers above or below the glide slope that are conducted for the purpose of remaining on the glide slope.

(e) Approaches. When approaching to land at an airport with an operating control tower, each pilot of

1 An airplane shall circle the airport to the left; and

2 A helicopter shall avoid the flow of fixed-wing aircraft.

(f) Departures. No person may operate an aircraft taking off from an airport with an operating control tower except in compliance with the following:

1 Each pilot shall comply with any departure procedures established for that airport by the FAA.

2 Unless otherwise required by the departure procedure or the applicable distance from clouds criteria, each pilot of a turbine-powered airplane and each pilot of a large airplane shall climb to an altitude of 1,500 feet above the surface as rapidly as practicable.

(g) Noise Abatement Runway System. When landing or taking off from an airport with an operating control tower and for which a formal runway use program has been established by the FAA, each pilot of a turbine-powered airplane and each pilot of a large airplane assigned a noise abatement runway by ATC shall use that runway. However, consistent with the final authority of the pilot in command concerning the safe operation of the aircraft as prescribed in section 91.3(a), ATC may assign a different runway if requested by the pilot in the interest of safety.

(h) Clearances Required. No person may, at an airport with an operating control tower, operate an aircraft on a runway or taxiway, or take off or land an aircraft, unless an appropriate clearance is received from ATC. A clearance to "taxi to" the takeoff runway assigned to the aircraft is not a clearance to cross that assigned take off runway or to taxi on that runway at any point, but is a clearance to cross other runways that intersect the taxi route to that assigned takeoff runway. A clearance to "taxi to" any point other than an assigned takeoff runway is a clearance to cross all runways that intersect the taxi route to that point.

(20) Airport Radar Service Areas - 91.130

(a) General. For the purposes of this section, the primary airport is the airport designated in part 71, Subpart L, for which the airport radar service area is designated. A satellite airport is any other within the airport radar service area.

(b) Deviations. An operator may deviate from any provision of this section under the provisions of an ATC authorization issued by the ATC facility having jurisdiction of the airport radar service area. ATC may authorize a deviation on a continuing basis or for an individual flight, as appropriate.

(c) Arrivals and Overflights. No person may operate an aircraft in an airport radar service area unless two-way radio communication is established with the ATC facility having jurisdiction over the airport radar service area prior to entering that area and is thereafter maintained with ATC facility having jurisdiction over the airport radar service area while within that area.

(d) Departures. No person may operate an aircraft within an airport radar service area except as follows:

1 From the primary airport or satellite airport with an operating control tower, unless two-way radio communication is established and maintained with the control tower in accordance with section 91.129 of this part, and thereafter as instructed by ATC while operating in the airport radar service area.

2 From a satellite airport without an operating control tower, unless two-way radio communication is established as soon as practicable after departing and thereafter maintained with the ATC facility having jurisdiction over the airport radar service area.

(e) Traffic Patterns. No person may take off or land an aircraft at a satellite airport within an airport radar service area except in compliance with FAA arrival and departure traffic pattern.

(f) Equipment Requirement. Unless otherwise authorized by the ATC, no person may operate an aircraft within an airport radar service area unless that aircraft is equipped with the applicable equipment in section 91.215.

(21) Terminal Control Areas - 91.131

(a) Operating Rules. No person may operate an aircraft within a terminal control area designated in part 71 of this chapter except in compliance with the following rules:

1 No person may operate an aircraft within a terminal control area unless that person has received an appropriate authorization from ATC prior to operation of that aircraft in that area.

2 Unless authorized by ATC, each person operating a large turbine engine-powered airplane to or from a primary airport shall operate at or above the designated floors while within the lateral limits of the terminal control area.

3 Any person conducting pilot training operations at an airport within a terminal control area shall comply with any procedures established by ATC for such operations in terminal control area.

(b) Pilot Requirements. (this section is not applicable to agency operations)

(c) Communications and Navigation Equipment Requirements. Unless otherwise authorized by ATC, no person may operate an aircraft within a terminal control area unless that aircraft is equipped with

1 An operable VOR or TACAN receiver (except for helicopter operations prior to January 1, 1990; and

2 An operable two-way radio capable or communications with ATC on appropriate frequencies for that terminal control area.

(d) Transponder Requirement. No person may operate an aircraft in a terminal control area unless the aircraft is equipped with the applicable operating transponder and automatic altitude reporting equipment specified in paragraph (a) of section 91.215, except as provided for in paragraph (d) of that section.

(22) Restricted and Prohibited Areas.- 91.133

(a) No person may operate an aircraft within a restricted area (designated in part 73) contrary to the restrictions imposed, or within a prohibited area, unless that person has the permission of the using or controlling agency, as appropriate.

(b) Each person conducting, within a restricted area, an aircraft operation (approved by the using agency) that creates the same hazards as the operations for which the restricted area as designated may deviate from the rules of this subpart that are not compatible with his operation of the aircraft.

(23) Positive Control Areas and Route Segments - 91.135

(a) Except as provided in paragraph (b) of this section, no person may operate an aircraft within a positive control area or positive control route segment designated in part 71 of this chapter unless the aircraft is

1 Operated under IFR at a specific flight level assigned by ATC;
2 Equipped with instruments and equipment required for IFR operations;
3 Flown by a pilot rated for instrument flight; and
4 Equipped, when in a positive control area, with

a The applicable equipment specified in section 91.125; and
b A radio providing direct pilot/controller communication on the frequency specified by ATC for the area concerned.

(b) ATC may authorize deviations from the requirements of paragraph (a) of this section. In the case of an inoperative transponder. ATC may immediately approved an operation within a positive control area allowing flight to continue if desired, to the airport of ultimate destination, including any intermediate stops, or to proceed to a place where suitable repairs can be made, or both. A request for authorization to deviate from a requirement of paragraph (a) of this section, other than for operation with an inoperative transponder as outlined above, must be submitted at least 48 hours before the proposed operation to the ATC center having jurisdiction over the positive control area concerned. ATC may authorize deviation on a continuing basis or for an individual flight, as appropriate.

(24) Temporary Flight Restrictions - 91.137

(a) The Administrator will issue a Notice to Airmen (NOTAM) designating an area within which temporary flight restrictions apply and specifying the hazard or condition requiring their imposition, whenever he determines it is necessary in order to

1 Protect persons and property on the surface or in the air from a hazard associated with an incident on the surface;
2 Provide a safe environment for the operation of disaster relief aircraft; or
3 Prevent an unsafe congestion of sightseeing and other aircraft above an incident or event which may generate a high degree of public interest.

The Notice to Airmen will specify the hazard or condition that requires the imposition of temporary flight restrictions.

(b) When a NOTAM has been issued under paragraph (a)1 of this section, no person may operate an aircraft within the designated area unless that aircraft is participating in the hazard activities and is being operated under the direction of the official in charge of on scene emergency response activities.

(c) When a NOTAM has been issued under paragraph (a)2 of this section, no person may operate an aircraft within the designated area unless at least one of the following conditions are met;

1 The aircraft is participating in hazard relief activities and is being operated under the direction of the official in charge of on scene emergency response activities.
2 The aircraft is carrying law enforcement officials.
3 The aircraft is operating under the ATC approved IFR flight plan.
4 The operation is conducted directly to or from an airport within the area, or is necessitated by the impracticability of VFR flight above or around the area due to weather, or terrain; notification is given to the Flight Service Station (FSS) or ATC facility specified in the NOTAM to receive advisories concerning disaster relief aircraft operations; and the operation does not hamper or endanger relief activities and is not conducted for the purpose of observing disaster.

5 The aircraft is carrying properly accredited news representative, and, prior to entering the area, a flight plan is filed with the appropriate FAA or ATC facility specified in the Notice to Airmen and the operation is conducted above the altitude used by the disaster relief aircraft, unless otherwise authorized by the official in charge of on scene emergency response activities.

(d) When a NOTAM has been issued under paragraph (a)3 of this section, no person may operate an aircraft within the designated area unless at least one of the following conditions is met:

1 The operation is conducted directly to or from an airport within the area, or is necessitated by the impracticability of VFR flight above or around the area due to weather or terrain, and the operation is not conducted for the purpose of observing the incident or event.
2 The aircraft is operating under an ATC approved IFR flight plan.
3 The aircraft is carrying incident or event personnel, or law enforcement officials.
4 The aircraft is carrying properly accredited news representatives and, prior to entering the area, a flight plan is filed with the appropriate FSS or ATC facility specified in the NOTAM.

(25) Emergency Air Traffic Rules - 91.139

(a) This section prescribes a process for utilizing Notices to Airmen (NOTAMs) to advise of the issuances and operations under emergency air traffic rules and regulations and designates the official who is authorized to issue NOTAMs on behalf of the Administrator in certain matters under this section.

(b) Whenever the Administrator determines that an emergency condition exists, or will exist, relating to the FAA's ability to operate the air traffic control system and during which normal flight operations under this chapter cannot be conducted consistent with the required levels of safety and efficiency

1 The Administrator issues an immediately effective air traffic rule or regulation in response to that emergency condition, and

2 The Administrator or the Associate Administrator for Air Traffic may utilize the NOTAM system to provide notification of the issuance of the rule or regulation.

Those NOTAMs communicate information concerning the rules and regulations that govern flight operations, the use of navigation facilities, and designation of that airspace in which the rules and regulations apply.

(c) When a NOTAM has been issued under this section, no person may operate an aircraft, or other device governed by the regulation concerned, within the designated airspace except in accordance with the authorizations, terms, and conditions prescribed in the regulation covered by the NOTAM.

(26) VFR Flight Plan: Information Required - 91.153

(a) Information Required. Unless otherwise authorized by ATC, each person filing a VFR flight plan shall include in it the following information:

1 The aircraft identification number and, if necessary, its radio call sign.

2 The type of the aircraft or, in the case of a formation flight, the type of each aircraft in the formation.

3 The full name and address of the pilot in command or, in the case of a formation flight, the formation commander.
4 The pilot and proposed time of departure.
5 The proposed route, cruising altitude (or flight level), and true airspeed at that altitude.
6 The point of first intended landing and the estimated elapsed time until over that point.
7 The amount of fuel on board (in hours).
8 The number of person in the aircraft, except where the information is otherwise readily available to the FAA.
9 Any other information the pilot in command or ATC believes is necessary for ATC purposes.

(b) Cancellation. When a flight plan has been activated, the pilot in command, upon canceling or completing the flight under the flight plan, shall notify an FAA Flight Service Station or ATC facility.

(27) Basic VFR Weather Minimums - 91.155

(a) Except as provided in section 91.155 (b) and 91.157, no person may operate an aircraft under VFR when the flight visibility is less, or at a distance from clouds that is less, than that prescribed for the corresponding altitude in the following table.

Altitude	Flight Visibility	Distance From Clouds
1,200 feet or less above the surface (regardless of MSL altitude within controlled airspace	3 statute miles	500 feet below 1,000 feet below 2,000 feet horizontal
Outside Controlled airspace	1 statute mile except as provided in section 91.155	Clear of Clouds
More than 1,200 feet above the surface but less than 10,000 feet MSL within controlled airspace	3 statute miles	500 feet below 1,000 feet above 2,000 feet horizontal
Outside controlled airspace	3 statute miles	500 feet below 1,000 feet above 2,000 feet horizontal
More than 1,000 feet above the surface and at or above 10,000 feet MSL	5 statute miles	1,000 feet below 1,000 feet above 1 mile horizontal

(b) Inapplicability. Notwithstanding the provisions of paragraph (a) of this section, the following operations may be conducted outside of controlled airspace below 1,200 feet above the surface:

1 Helicopter. When the visibility is less than 1 mile during day hours or less than 3 miles during night hours, a helicopter may be operated clear of clouds if operated at a speed that allows the pilot adequate opportunity to see any air traffic or obstruction in time to avoid a collision.

2 Airplane. When the visibility is less than 3 miles but not less than 1 mile during night hours, an airplane may be operated clear of clouds if operated in an airport traffic pattern within one-half mile of the runway.

(c) Except as provided in section 91.157, no person may operate an aircraft, under VFR, within a control zone beneath the ceiling when the ceiling is less than 1,000 feet.

(d) Except as provided in Section 91.157, no person may take off or land an aircraft, or enter the traffic pattern of an airport, under VFR within a control zone

1 Unless ground visibility at that airport is at least 3 statute miles; or

2 If ground visibility is not reported at that airport, unless flight visibility during landing or takeoff, or while operating in the traffic pattern, is at least 3 statute miles.

(e) For the purpose of this section, an aircraft operating at the base altitude of a transition area or control area is considered to be within the airspace directly below that area.

(28) VFR Cruising Altitude or Flight Level - 91.159

Except while holding in a holding pattern of 2 minutes or less, or while turning, each person operating an aircraft under VFR in level cruising flight more than 3,000 feet above the surface shall maintain the appropriate altitude or flight level prescribed below, unless otherwise authorized by ATC:

(a) When operating below 18,000 feet MSL and

1 On a magnetic course of zero degrees through 179 degrees, any odd thousand foot MSL altitude + 500 feet (such as 3,500, 5,500, or 7,500); or

2 On a magnetic course of 180 degrees through 359 degrees, any even thousand foot MSL altitude + 500 feet (such as 4,500, 6,500, or 8,500).

(b) When operating above 18,000 feet MSL to flight level 290 (inclusive and

1 On a magnetic course of zero degrees through 179 degrees, any odd flight level + 500 feet (such as 195, 215, 235); or
2 On a magnetic course of 180 degrees through 359 degrees, an even flight level + 500 feet (such as 185, 295, 225).

(c) When operating above flight level 290 and
1 On a magnetic course of zero degrees through 179 degrees, any flight level, at 4,000-foot intervals, beginning at and including flight level 300 (such as flight level 300, 320, 360, or 400).

(29) ATC Clearance and Flight Plan Required - 91.173

No person may operate an aircraft in controlled airspace under IFR unless that person has

(a) Filed an IFR flight plan; and
(b) Received an appropriate ATC clearance.

(30) Takeoff and Landing Under IFR - 91.175

(a) Instrument Approaches to Civil Airports. Unless otherwise authorized by the Administrator, when an instrument letdown to a civil airport is necessary, each person operating an aircraft, except a military aircraft of the United States, shall use a standard instrument approach procedure prescribed for the airport in Part 97 of this chapter.

(b) Authorized DH or MDA. For the purpose of this section, when the approach procedure being used provides for and requires the use of DH or MDA, the authorized DH or MDA is the highest of the following:

1 The DH or MDA prescribed by the approach procedure.
2 The DH or MDA prescribed for the pilot in command.
3 The DH or MDA for which the aircraft is equipped.

(c) Operate below DH or MDA. Where a DH or MDA is applicable, no pilot may operate an aircraft, except a military of the United States, at any airport below the authorized MDA or continue an approach below authorized DH unless

1 The aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal maneuvers, and for operations under Part 121 or Part 135 unless that descent rate will allow touchdown zone of the runway of intended landing;
2 The flight visibility is not less than the visibility prescribed in the standard instrument approach being used; and
3 Except for a Category II or Category III approach where any necessary visual reference requirements are specified by the Administrator, at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:

a The approach light system, except that the pilot may not descend below 100 feet above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable.
b The threshold.
c The threshold markings.
d The threshold lights.
e The runway and identifier lights.
f The visual approach slope indicator.
g The touchdown zone or touchdown zone markings.
h The touchdown zone lights.
i The runway or runway markings.
j The runway lights.

(d) Landing. No pilot operating an aircraft, except a military aircraft of the United States, may land that aircraft when the flight visibility is less than the visibility prescribed in the standard instrument approach procedures being used.

(e) Missed Approach Procedures. Each pilot operating an aircraft, except a military aircraft of the United States, shall immediately execute an appropriate missed approach procedures when either of the following conditions exist:

1 Whenever the requirements of paragraph (c) of this section are not met at either of the following times;

a When the aircraft is being operated below MDA; or

b Upon arrival at the missed approach point, including a DH where a DH is specified and its use is required, and at any time after that until touchdown.

2 Whenever an identifiable part of the airport is not distinctly visible to the pilot during a circling maneuver at or above MDA, unless the inability to see an identifiable part of the airport results only from a normal bank of the aircraft during the circling approach.

(g) Military Airports. Unless otherwise prescribed by the Administrator, each person operating a civil aircraft under IFR into or our of a military airport shall comply with the instrument approach procedures and the takeoff and landing minimums prescribed by the military authority having jurisdiction of that airport.

(h) Comparable Values of RVR and Ground Visibility.

1 Except for Category II and Category III minimums, if RVR minimums for takeoff or landing are prescribed in an instrument approach procedure, but RVR is reported for the runway of intended operation, the RVR minimum shall be converted to ground visibility in accordance with the table in paragraph (h)2 of this section and shall be the visibility minimum for takeoff or landing on that runway.

2

RVR (feet)	Visibility (statute miles)
1,600	1/4
2,400	1/2
3,200	5/8
4,000	3/4
4,500	7/8
5,000	1
6,000	1 1/4

(i) Operations on Unpublished Routes and Use of Radar in Instrument Approach Procedures. When radar is approved at certain locations for ATC purposes, it may be used for not only surveillance and precision radar approaches, as applicable, but also may be used in conjunction with instrument approach procedures predicated on other types of radio navigational aids. Radar vectors may be authorized to provide course guidance through the segments of an approach to the final course of fix. When operating on an unpublished route or while being radar vectored, the pilot, when an approach clearance is received, shall, in accordance with section 91.177, maintain the last altitude assigned to that pilot until the aircraft is established on a segment of a published route or instrument approach procedure unless a different altitude is assigned by ATC. After the aircraft is so established, published altitudes apply to descent within each succeeding route or approach segment unless a different altitude is assigned by ATC. Upon reaching the final approach course or fix, the pilot may either complete the instrument approach in accordance with a procedure in accordance with a procedure approved for the facility or continue a surveillance or precision radar approach to a landing.

(j) Limitation on Procedure Turns. In the case of a radar vector to a final approach course or fix, a timed approach from a holding fix, or an approach for which the procedure specifies (No PT), no pilot may make a procedure turn unless cleared to do so by ATC.

(k) ILS components. The basic ground components of an ILS are the localizer, glide slope, outer marker, middle marker, and, when installed for use with Category II or Category III instrument approach procedures, an inner marker. A compass locator or precision radar may be substituted for the outer or middle marker, DME, VOR, or nondirectional beacon fixes authorized in the standard instrument approach procedure or surveillance radar may be substituted for the outer marker.

Applicability of, and substitution for, the inner marker for Category II or III approaches is determined by the appropriate Part 97 approach procedure, letter of authorization, or operations specification pertinent to the operation.

C. FEDERAL AVIATION REGULATION PART 125, CERTIFICATION AND OPERATIONS: AIRPLANES HAVING A SEATING CAPACITY OF 20 OR MORE PASSENGERS OR A MAXIMUM PAYLOAD CAPACITY OF 6,000 POUNDS OR MORE

The following section is a listing of Federal Aviation Regulations found in 14 CFR Part 125 that apply to the operation of agency aircraft.

(1) Emergency Equipment: Extended Overwater Operations - 125.209

(a) No person may operate an airplane in extended overwater operations unless it carries, installed in conspicuously marked locations easily accessible to the occupants if a ditching occurs, the following equipment:

1 An approved life preserver equipped with an approved survivor locator light, or an approved flotation means, for each occupant of the aircraft. The life preserver or other flotations means must be easily accessible to each seated occupant. If a flotation means other than a life preserver is used, it must be readily removable from the airplane.

2 Enough approved life rafts (with proper buoyancy) to carry all occupants of the airplane, and at least the following equipment for each raft clearly marked for easy identification

a One canopy (for sail, sunshade, or rain catcher);
b One radar detector (or similar device);
c One life raft repair kit;
d One bailing bucket;
e One signaling mirror;
f One police whistle;

g One raft knife;
h One CO2 bottle for emergency inflation;
i One inflation pump'
j Two oars;
k One 75-foot retaining line;
l One magnetic compass;
m One dye marker;
n One flashlight having at least two size "D" cells or equivalent;
o At least one approved pyrotechnic signaling device;
p A 2-day supply of emergency food ratings supplying at least 1,000 calories a day for each person;

8 One sea water desalting kit for each two person that raft is rated to carry;
9 One fishing kit; and
10 One book on survival appropriate for the area in which the airplane is operated.

(b) No person may operate an airplane in extended overwater operations unless there is attached to one of the life rafts required by paragraph (a) of this section, a survival type emergency locator transmitter that meets TSO-C91. Batteries used in this transmitter must be replaced (or recharged, if the batteries are rechargeable) when the transmitter has been in use for more than 1 cumulative hour, and also when 50 percent of their useful life (or for rechargeable batteries, 50 percent of their useful life or charge), as established by the transmitter manufacturer under TSO-C91 has expired. The new expiration date for the replacement or recharged batteries must be legibly marked on the outside of the transmitter. The battery useful life or useful life of charge requirements of this paragraph do not apply to batteries (such as water-activated batteries) that are essentially unaffected during probable storage intervals.

(2) Takeoff and Landing Weather Minimums; IFR - 125.381

(a) Regardless of any clearance from ATC, if the reported weather conditions are less than that specified in the certificate holder's operations specifications, no pilot may

1 Takeoff an airplane under IFR; or
2 Except as provided in paragraph (c) of this section, land an airplane under IFR.

(b) Except as provided in paragraph (c) of this section, no pilot may execute an instrument approach procedure if the latest reported visibility is less than the landing minimums specified in the certificate holder's operations specifications.

(c) If a pilot initiates an instrument approach procedure when the latest weather report indicates that the specified visibility minimums exist, and a later weather report indicates below minimum conditions is received after the airplane

1 Is on an ILS final approach and has passed the outer marker,
2 Is on final approach segment using a nonprecision approach procedure, or
3 Is on PAR final approach and has been turned over to the final approach controller, the approach may be continued and a landing may be made if the pilot in command finds, upon reaching the authorized MAP or DH, that actual weather conditions are at least equal to the minimums prescribed in the operations specifications.

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APPENDIX B. TRAINING

1. GENERAL

The unit director of operations shall be responsible for ensuring that all crewmembers have been trained. A record of the successful completion or failure of any training should be placed in crewmember's individual flight training record (IFTR). The IFTR should document the dates and results of training in a manner specified by the agency. It should be retained for safety and analysis purposes as long as the crewmember is associated with the agency. This chapter presents the minimum requirements for a safety program. It may be supplemented by the agency manager of flight operations or the unit director of operations to meet additional agency requirements for training and checking. The following sections suggest minimum requirements for agency training programs.

2. INDOCTRINATION TRAINING

All crewmembers shall receive basic indoctrination training prior to specific crew position training. Indoctrination training shall consist of aircraft operations manual training, basic weather training, hazardous materials training, and mission required training.

A. AIRCRAFT OPERATIONS MANUAL

All crewmembers shall be instructed in the contents of the agency's aircraft operations manual and its use as a reference tool.

B. BASIC WEATHER

Basic weather training shall consist of a discussion of general and local weather phenomena to ensure flight crewmembers are familiar with the environment in which they operate. The capabilities and limitations of local weather services shall also be discussed. This training is not required for non-flight crewmembers.

C. HAZARDOUS MATERIALS

All crewmembers involved in the transport of hazardous materials shall receive training in the hazardous materials to be encountered during agency missions. The training shall consist of handling, loading, disposition, and documentation in both normal and emergency operations.

D. MISSION REQUIRED TRAINING

This training shall be established by the agency manager of flight operations with the assistance of the unit directors of operation. The training will prepare all crewmembers for further aircraft training in specific agency missions. Each agency should prepare training materials to orient crewmembers in the mission specific requirements related to their positions. Lead plane pilots in the Forest Service, for example, should receive training in retardant bombing techniques and applications, fire behavior, ground crew safety, air traffic control over a large fire, and other agency specific functions.

3. INITIAL EQUIPMENT TRAINING

All crewmembers shall satisfy the prerequisites and complete the initial course of training and crew position specific training outlined in the following sections.

A. PREREQUISITES

The minimum requirements for each crew position are discussed below. Examples of the minimum requirements include crewmember, flight time, and medical requirements. These are discussed below.

(1) Pilot in Command. A pilot in command shall:

(a) Hold or be able to acquire at least a commercial pilot certificate with appropriate category, class and type rating, and an instrument rating;

(b) Have at least 1200 hours of flight time as a pilot, including:

1 500 hours of cross country flight time;
2 100 hours of night flight time, with at least 10 night takeoffs and landings; and
3 75 hours of actual or simulated instrument flight time, at least 50 hours of which were in actual flight. The instrument flight time is not required if mission requirements dictate visual flight rule (VFR) only operations; and

(c) Hold at least a second-class medical certificate or equivalent.

(2) Second In Command. A second in command shall:

(a) Hold or be able to acquire at least a commercial pilot certificate with appropriate category and class ratings and an instrument rating;

(b) In the past six calendar months have logged at least:

1 Six hours of instrument flight time under actual or simulated conditions, at least three hours of which were in the category of aircraft involved, including at least six instrument approaches; or

2 Passed an instrument competency check in the category of aircraft involved. The instrument flight time and approaches are not required if mission requirements dictate VFR only operations; and

(c) Hold at least a second-class medical certificate or equivalent.

(3) Flight Engineer. A flight engineer shall hold or be able to acquire a flight engineer certificate with appropriate ratings and limitations and hold at least a second-class medical certificate or equivalent.

(4) Flight Navigator. A flight navigator shall hold or be able to hold a flight navigator certificate and hold at least a second-class medical certificate or equivalent.

(5) Cabin Attendants and Other Crewmembers. Cabin attendants and any other crewmembers required by agency missions need not possess an airman certificate or have the ability to hold one. It is recommended that the agency establish minimum medical standards for cabin attendants and other crewmembers.

B. INITIAL COURSE OF TRAINING

An initial course of training shall be provided to prepare previously unqualified crewmembers to perform the duties of the specific crew positions. The initial course of training shall be developed to include training in the specific types of aircraft to be used and training in the missions specific to individual agencies. The course of study should cover aircraft specific ground school subjects, flight training, and training for each crew position. The flight training portion may be conducted in either a flight simulator or an actual aircraft.

(1) Ground School. The ground school training shall be aircraft specific. Flight crewmembers should receive sufficient instruction to enable them to perform their flight functions efficiently and safely. Initial ground school subjects should include, but not be limited to the following areas:

(a) Aircraft, general:
(b) Aircraft limitations;
(c) Aircraft systems;
(d) Normal procedures;
(e) Abnormal procedures (if applicable);
(f) Emergency procedures; and
(g) Aircraft performance

(2) Flight Training. The flight training portion of the initial course of training shall provide sufficient instruction to meet the general requirements of the crew specific training section of this manual. If two or more persons comprise the crew, instruction should include crew interaction and cockpit resource management skills. Each agency shall determine the number of flight training hours required.

(3) Agency-Specific Training. Agencies shall establish training programs specific to mission requirements. These programs shall include both ground and flight curricula.

C. CREW POSITION - SPECIFIC TRAINING

The following training shall be provided for each crew position, including the pilot in command, second in command, flight engineer, flight navigator, and cabin attendants or other crewmembers. The training should be designed to prepare each crewmember for any necessary qualification checks.

(1) Pilot in Command. Pilot in command training should prepare the pilot for a flight check in accordance with FAR Part 61, Appendix A for airplanes and Appendix B for rotorcraft, or their equivalents. The flight check should include all applicable flight and ground maneuvers such as taxiing and takeoffs. The initial qualification check will be conducted by at least a designated qualified check airman.

(2) Second in Command. Second in command training should prepare the pilot for the duties of a required second in command. The second in command's flight check should include instrument approaches, landing competency and currency, and checklist accomplishment and usage. It should be designed so that the successful candidate will meet the minimum prerequisites outlined in this chapter. A flight check may be conducted by a designated qualified check airman.

(3) 5.2.3.3 Flight Engineer. The flight engineer training shall prepare the individual for the duties of a required flight engineer. The course of training should prepare the candidate for a flight check in accordance with FAR Part 63, Section 63.39, or its equivalent. Training should include fuel management and electrical, hydraulic, air conditioning, and pressurization systems operation in both normal and emergency situations. The initial qualification check may be given by a designated qualified check airman.

(4) 5.2.3.4 Flight Navigator. The flight navigator training shall prepare the candidate for a test in accordance with FAR Part 63, Appendix A, or its equivalent. The training should include long-range navigation systems such as LORAN, OMEGA, DOPPLER, or celestial navigation. The course should also prepare the candidate to function on the specific aircraft specified by mission requirements. The flight check may be given by a qualified FAA inspector, a designed examiner, or a check airman if the individual has previously been qualified as a flight navigator.

(5) 5.2.3.5 Cabin Attendants or Other Crewmembers. The course of training for cabin attendants and other crewmembers shall be designed so as to prepare the candidates to perform their required functions in flight or during emergencies. For cabin attendants, training will emphasize evacuation techniques. The agency shall determine the degree of normal and emergency training to be conducted. No flight check is required, but the candidates should be certified proficient by a qualified instructor.

4. RECURRENT TRAINING

Minimum annual training requirements shall be established to ensure that the required crewmembers maintain currency and proficiency. All recurrent training and checking should be conducted every 12 calendar months. For the purposes of this manual, the training and checking may be conducted the month prior or the month after the 12th calendar month.

A. GROUND SCHOOL

Each required crewmember shall receive an annual refresher course of training. This training need not be as detailed as the initial course of training, but should include refresher training in specific aircraft systems, normal and emergency operations, specific crew duty responsibilities and mission requirements, and hazardous materials.

B. ANNUAL CHECK REQUIREMENTS

To ensure that each crewmember maintains familiarity and competency with operating procedures, each agency shall institute a system for providing annual proficiency checks for each crew position.

(1) Pilot in Command. Each pilot in command shall receive an annual flight check. The check should include proficiency and required instrument procedures and any mission specific requirements identified by the agency manager of flight operations or the director of operations. This check is designed to recertify the pilot to act as pilot in command. The flight check may be conducted in a flight simulator or an aircraft by a qualified check airman.

(2) Second in Command. Each second in command shall receive an annual flight check. The flight check should be similar to that of a pilot in command, but with special emphasis on the duties of an second in command. The check should include proficiency and instrument procedures and any specific mission requirements identified by the agency manager of flight operations or the director of operations. The flight check may be conducted in a flight simulator or an aircraft by a qualified check airman.

(3) Flight Engineer. Each flight engineer is considered qualified if within the preceding six calendar months that person has had at least 50 hours of flight time as a flight engineer or has receiver a flight check on the appropriate aircraft by a qualified check airman. Any flight check will ensure that the flight engineer is familiar and component with all essential current information. The flight check may be conducted in a flight simulator or an aircraft.

(4) Flight Navigator. Each flight navigator shall receive either an annual test or a flight check to ensure familiarity and competency with all essential current information and operating procedures. This test may be conducted with the required ground school training. A flight check may be conducted in an aircraft by a qualified check airman. The decision to use either the test or the flight check is the responsibility of the agency manager of flight operations and the unit director of operations.

(5) Cabin Attendants and Other Crewmembers. Each flight attendant and other crewmember shall receive at least a test to ensure familiarity with the duties and responsibilities of the assigned crew position. This test may be conducted concurrently with the required refresher ground school training. The agency manager of flight operations or the unit director of operations has the authority to require a flight check in lieu of a written test.

C. ANNUAL LINE/MISSION CHECK (PILOT IN COMMAND ONLY)

Six months following the initial training and checking or the annual required check, each pilot in command shall receive a line/mission check conducted by a qualified check airman. This check should be conducted during a normal mission or line trip. The following items should be included in this check:

(1) Preflight/flight planning;

(2) Aircraft systems and flight proficiency;

(3) Use of checklists and standards procedures;

(4) Knowledge of the Aircraft Operations Manual;

(5) Knowledge of the minimum equipment list (MEL) (if applicable);

(6) Knowledge of weather information;

(7) Knowledge of instrument procedures (if applicable);

(8) Specific mission requirements; and

(9) Other items required by the agency manager of flight operations or the unit director of operations.

D. COURSE OF TRAINING IN LIEU OF LINE/MISSION CHECK

At the discretion of the agency manager of flight operations, a block of training in either a simulator or an aircraft may be substituted for the annual line/mission check.

If this substitution is elected, the line/mission check items must be covered. Special training (i.e., windshear training) may be included. This training will be conducted by a qualified check airman.

E. CREW TRAINING RECORDS

Each agency shall establish an individual flight training record (IFTR) system. The system may consist of manual or computerized files for each crewmember and should include the following fields as a minimum:

(1) Name;

(2) Crew position;

(3) Physical date;

(4) License type;

(5) Number certificate;

(6) Date of indoctrination training completion;

(7) Date of initial equipment training completion; and

(8) Dates of completion for the following recurrent training:

(a) Ground school

(b) Annual check

(c) Annual line check

(d) Special training (any agency-specific training deemed necessary i.e., windshear, seat dependent task training).

5. FLIGHT CHECK STANDARDS

The FAA has developed certain standards for successful flight checks in their flight test guides. These are parameters for the successful completion of any maneuver, such as permissible deviations from heading, airspeed, and altitude controls. Agencies should review FAA standards to determine their applicability to agency missions. These standards of performance may not be specific enough to meet the varied requirements of each Federal agency. Therefore, each agency manager of flight operations, with the assistance of the directors of operations, may want to develop a listing of standards to be applied during required annual checks. Some agencies may choose to make to the standards more stringent. For example, the standard for heading control in a certain maneuver may be + or - 0 degrees. An agency may wish to make this + or - 5 degrees. These standards should allow for uniformity of proficiency, operations, and safety within the scope of the agency mission.

6. RECENT FLIGHT EXPERIENCE

Recent flight requirements are detailed in this section for each crewmember. Satisfactory performance of these requirements is necessary to maintain currency.

A. PILOTS

In addition to the annual training and checking requirements of this chapter, each pilot must have made at least three takeoffs and landings in the applicable type aircraft or an approved flight simulator within the preceding 90 days. A pilot who has not met these requirements may re-establish recency of experience by making three takeoffs and landings under the supervision of a check airman. At least one landing should be performed with a simulated engine failure. if the pilot is instrument qualified, one landing should be performed from either an instrument landing system (ILS) or appropriate instrument approach.

B. FLIGHT ENGINEERS

In addition to the annual training requirements detailed in this chapter, each flight engineer must have logged at least 50 hours of flight time in the preceding six calendar months.

A flight engineer who has not met these requirements should receive a flight check to ensure familiarity and competency with all essential current information and operating procedures. This check may be conducted in an approved flight simulator or an aircraft by a qualified check airman.

C. FLIGHT NAVIGATORS, CABIN ATTENDANTS, AND OTHER CREWMEMBERS

There are no recency of experience requirements for flight navigators, cabin attendants, or other crewmembers.

7. SPECIAL TRAINING

Agencies shall also determine other training areas necessary for safe and efficient aircraft operations. Examples of special training areas are windshear, check airmen training, seat dependent task training, and cockpit resource management.

A. WINDSHEAR

Recent accident history has accented the hazards associated with windshear and microbursts. With the assistance of several airlines and other agencies, the FAA has developed a windshear education and recovery strategy. Each agency should use the FAA windshear education and recovery strategy to develop a windshear training program.

(1) Windshear recognition and avoidance information; and

(2) Aircraft specific windshear recovery techniques.

B. CHECK AIRMAN TRAINING

Each flight crewmember candidate should receive some specialized training prior to being designated check airman. As a minimum, training topics should include:

(1) Responsibilities of a check airman;

(2) Techniques of instruction;

(3) Training in conducting and observing flight checks;

(4) Required documentation; and

(5) Application of agency standards.

C. SEAT DEPENDENT TASK TRAINING (MULTIENGINE AIRCRAFT ONLY)

Many tasks in flight are the sole responsibility of a specific flight crewmember. In some multi-crew aircraft operations, certain tasks can only be performed from a certain crew specific seat. These tasks are dependent on the aircraft flown. It is the responsibility of each agency to identify these tasks and provide annual training to those individuals who will be performing them. Any such training should be documented in a manner prescribed by the agency manager of flight operations.

An example of a seat dependent task is the emergency extension of landing gear in a Boeing aircraft. The landing gear controls can only be reached from the second in command seat. Thus, the second in command must be trained to perform this function.

D. COCKPIT RESOURCE MANAGEMENT (CRM) (MULTI-CREW AIRCRAFT ONLY)

Each agency operating multi-crew aircraft shall investigate the need for CRM. CRM is the effective utilization of all available resources: hardware, software, and people. Most training programs emphasize the technical aspects of flying and do not deal with the types of crew management strategies and techniques essential to safe flight operation. CRM training would include group decision making, effective communication, leadership, and managerial skills. CRM should be viewed as the outcome of effective training and standardization. For further information on CRM, refer to FAA Advisory Circular, AC 120-51, published 12/1/89.

8. RESERVED FOR AGENCY-SPECIFIC INFORMATION

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APPENDIX C. DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

This chapter defines the primary terms, acronyms, and abbreviations used in this manual. It does not define all the terms relevant to the operation of agency aircraft. Each operating agency should supplement this chapter with further definitions, acronyms, and abbreviations specific to their operation. Other definitions may be found in the Airmans's Information Manual.

1. DEFINITIONS

ABNORMAL PROCEDURES - An orderly set of actions to be followed by the flight crew in the event of a situation arising that requires their attention. If these actions are not followed, degradation of aircraft systems and further failures may occur. These procedures are normally set forth in the aircraft Approved Flight Manual.

ADMINISTRATOR - The Federal Aviation Administration Administrator or any person to whom he has designated his authority in the matter concerned.

AIRCRAFT - A device that is used or intended to be used for flight in the air.

AIRCRAFT ACCIDENT - An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage.

AIRMAN'S INFORMATION MANUAL (AIM) - An FAA publication which contains information about the status of components of the National Airspace System and which serves as a preflight and inflight reference for pilots.

AIRPLANE - An engine-driven fixed-wing aircraft heavier than air, that is supported in flight by the dynamic reaction of the air against its wings.

AIRWORTHINESS - Prepared and in fit condition to fly.

AIR TRAFFIC CONTROL (ATC) - A service provided by certificated personnel to promote the safe, orderly, expeditious flow of air traffic within controlled airspace.

APPLIANCE - Any instrument, mechanism, equipment, part, apparatus, appurtenance, or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight, installed in or attached to the aircraft, and not part of an airframe, engine, or propeller.

BECQUEREL - A unit of radioactivity defined as 1 atomic transformation per second.

Category I - An ILS approach with a decision height, DH, of not less than 200 feet above the touchdown zone and a visibility not less than 1800 feet RVR.

Category II - An ILS approach with a decision height, DH, of not less than 100 feet above the touchdown zone and a visibility of not less than 1200 feet RVR.

Category III - An ILS with a decision height, DH, of not less than 50 feet above the touchdown zone and a visibility of not less than 700 feet RVR.

CERTIFICATE - A Department of Transportation, Federal Aviation Administration Airman Certificate, i.e. pilot, flight engineer, or flight navigator.

CHECK AIRMAN - A pilot in command, flight engineer, or flight navigator who has received special training and, at the discretion of the operating agency, may administer the required pilot, flight engineer and, flight navigator flight checks.

CIVIL AIRCRAFT - An aircraft other than a public aircraft.

COMMERCIAL AIRPORT - An airport that is used in air commerce.

COMBUSTIBLE - Capable of igniting and burning.

CONTROLLED AIRSPACE - Designated airspace within which some or all aircraft may be subject to air traffic control.

CORROSIVE - Capable of the act or process of dissolving or wearing away.

CREW - A general term to include both flight crewmembers and crewmembers.

CREWMEMBER - Any person, other than a flight crewmember, who is properly trained to perform a specific function in flight.

CRYOGENIC MATERIAL - A refrigerated, liquified gas having a boiling point colder than -130 degrees F at one atmosphere absolute. It is maintained in liquid form by low temperature rather than by pressure. An example of this is liquid nitrogen.

DANGEROUS GOODS - See hazardous materials.

DECISION ALTITUDE - A decision height expressed in altitude above mean sea level.

DECISION HEIGHT (DH) - With respect to the operation of aircraft, the height above the touchdown zone at which a decision must be made during an ILS, MLS, or PAR instrument approach ot either continue the approach or to execute a missed approach.

DESIGNATED EXAMINER - A person who has been designated by the FAA to act as a representative of the Administrator in examining, inspecting, and testing persons for the purpose of issuing airman certificates.

EMERGENCY PROCEDURES - Emergency procedures are an orderly set of actions to be followed by the flight crew in the event of a situation that requires their immediate attention. If such actions are not followed, serious aircraft damage or serious injury to its occupants is likely to occur. Emergency procedures are normally set forth in the aircraft Approved Flight Manual.

EMPTY WEIGHT - For the purposes of this manual, empty weight means the weight of the airframe, engines, propellers, and fixed equipment. Empty weight excludes the weight of crew and payload, but includes the weight of all fixed ballast, unusable fuel supply, undrained oil, total quantity of engine coolant, and total quantity of hydraulic fluids.

ETIOLOGICAL AGENTS - An agent that causes a disease or disorder as determined by medical diagnosis.
EXCEPTION - A provision in the regulations which excludes a specific item of hazardous materials/dangerous goods from the requirements normally applicable to that item.

EXEMPTION - An authorization issued by an appropriate national authority providing relief from the provisions of the regulation.

EXTENDED OVERWATER OPERATION - With respect to aircraft other than helicopters, an operation over water at a horizontal distance of more than 50 nautical miles from the nearest shoreline. With respect to helicopters, an operation over water at a horizontal distance of more than 50 nautical miles from the nearest shoreline and more than 50 nautical miles from an off-shore structure.

FATAL INJURY - Any injury which results in death within 30 days of an accident.

FLASHPOINT - The minimum temperature at which a liquid gives off vapor within a test vessel in sufficient concentration to form an ignitable mixture with air near the surface of the liquid. Simply, the lowest temperature at which a flammable vapor is given off a liquid in sufficient quantity to be ignited in air when exposed momentarily to a source of ignition.

FLIGHT CREWMEMBER - A person certified and/or trained to act as a pilot, flight engineer, or flight navigator.

FLIGHT LEVEL - A level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury. Each is stated in three digits that represent hundreds of feet. For example, flight level 200 represents a barometric altimeter indication of 20,000 feet; FL 200, is an indication of 20,000 feet.

HAZARDOUS MATERIALS - Articles or substances which are capable of posing a significant risk to health, safety, or property when transported.

HELICOPTER - A helicopter is a rotorcraft that, for its horizontal motion, depends principally on its engine-driven rotors.

INCIDENT - An occurrence other than an accident associated with the operation of an aircraft, which affects or could affect the safety of operation.

IN-FLIGHT - Anytime the aircraft, helicopter, or rotorcraft is moving under it's own power and an intent for flight exists.

INSTRUMENT FLIGHT RULES (IFR) - A set of rules governing the conduct of flight under instrument conditions.

INSTRUMENT METEOROLOGICAL CONDITIONS (IMC) - The atmospheric conditions such that flight under visual flight rules (VFR) is not warranted or permitted. This condition requires flight under instrument flight rules (IFR).

JUSTIFIABLE AIRPLANE EQUIPMENT - Any equipment necessary for the operation of the aircraft. It does not include equipment or ballast specifically installed, permanently or otherwise, for the purpose of altering the empty weight of an aircraft to meet the maximum payload capacity.

KNOTS - Nautical miles per hour.

LARGE AIRCRAFT - Any aircraft with a maximum certified takeoff gross weight of greater than 12,500 pounds.

LIMITATION - A maximum or minimum parameter as specified by the manufacturer.

LIMITED QUANTITY - The maximum amount of hazardous materials/dangerous goods of which there is a specific labeling and packaging exception.

LIGHT AIRCRAFT - Any aircraft with a maximum certified gross weight of less than 12,500 pounds.

MAGNETIZED MATERIAL - (1) A substance is considered to be a magnetized material if when packaged for transportation by air it has a magnetic field strength of 0.002 gauss or more, at a distance of seven feet, from any point on the surface of the package, or which is of such mass that it could affect the aircraft instruments, particularly the compasses.

(2) Any package which as a measurable magnetic field greater than 0.00.525 gauss, when measured from any surface of a distance of 15 feet, must be shielded to reduce the reading to not greater than 0.00525 gauss before offering for shipment by air. Examples: magnet bars, masses of "ferromagnetic" metals such as automobile parts, fencing, and piping are not restricted but may be subject to carrier's special stowage regulations since they may also affect aircraft instruments, particularly the compasses.

MASTER MINIMUM EQUIPMENT LIST - An FAA certified minimum equipment list (MEL) for a specific make, model, and series of aircraft upon which all minimum equipment lists must be based. It is a list of those items of equipment related to airworthiness and operating regulations and other items of equipment which the administrator finds may be inoperative and yet maintain an acceptable level of safety by appropriate conditions and limitations; it does not include such items that are obviously required such as wings, flaps, and rudders.

MAXIMUM PAYLOAD CAPACITY - (1) For an airplane for which a maximum zero fuel weight is prescribed by FAA technical specifications, less empty weight, less all justifiable airplane equipment, and less the operating load (consisting of minimum flight crew, foods and beverages, and supplies and equipment related to foods and beverages, but not including fuel and oil); (2) For all airplanes, helicopters and rotorcraft, the maximum certificated takeoff weight, less the empty weight, less all justifiable equipment, and less that operating load (consisting of minimum fuel load, oil, and flight crew). The allowances for the weight of the crew, oil and fuel are as follows:

(a) crew - 200 pounds for each required crewmember,
(b) oil - 350 pounds
(c) fuel - The minimum weight of fuel required for a flight between domestic points 174 nautical miles apart under VFR weather conditions that does not involve extended overwater operations.

MAXIMUM ZERO FUEL WEIGHT - The maximum permissible weight of an airplane, helicopter, or rotorcraft with no disposable fuel or oil. The zero fuel weight (ZFW) figure may be found in the airplane Type Certificate Data Sheet or the Approved Airplane Flight Manual.

MICROBURST - A small downburst with outbursts of damaging winds extending 2.5 miles or less. In spite of its small horizontal scale, an intense microburst could induce wind speeds as high as 150 knots.
MILITARY AIRPORT - An airport that is operated by the armed forces.

MINIMUM DESCENT ALTITUDE - The lowest published altitude, expressed in feet above mean sea level, to which descent is authorized on final approach or during circle-to-land maneuvering in execution of a standard instrument approach procedure where no electronic glide slope is provided.

MINIMUM EQUIPMENT LIST - A list which is specific to a make, model, series, and configuration of an aircraft. It is developed by an aircraft operator with reference to the FAA master minimum equipment list (MMEL) and may not deviate from the provisions, limitations, and procedures of the FAA MMEL.

NON-COMMERCIAL AIRPORT - Any airport that is not used in air commerce.

NON-PRECISION APPROACH - A standards instrument approach procedure in which no electrical glide slope is provided; e.g., TACAN, etc.

NO LIMIT - The maximum quantity per package is not limited.

NORMAL PROCEDURES - An orderly set of actions to be followed by the crew during the routine operation of the aircraft.

OPERATOR - Any person who causes or authorizes the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft.

ORGANIC PEROXIDES - A thermally unstable substance which may produce extreme heat and burn at accelerating rate.

ORGANIZATION - "Organization" may be interchangeable with agency. It refers to a government agency, i.e., FBI, DOE, NASA, etc.

OXIDIZING MATERIALS - Any substance that by yielding oxygen may cause or contribute to the combustion of other materials.

PILOT IN COMMAND - The pilot responsible for the operation and safety of an aircraft during flight.

PLACARD - A printed or written announcement displayed in or on an aircraft.

POLYMERIZABLE MATERIALS - Any liquid, solid, or gaseous material which under conditions incident to transportation, may (polymerize) combine or react with itself so as to cause dangerous evolution of gas or heat. These materials are bases for plastics and other compounds which tend to jell and in doing so generate heat with consequent increase of pressure and possible generation of fire.

PRECISION APPROACH - A standard instrument approach procedure in which an electronic glideslope/glidepath is provided; e.g., ILS, MLS, etc.

PRIVATE AIRPORT - An airport that is privately owned and may not be available for public use.

PROPER SHIPPING NAME - The name to be used to describe a particular article or substance in all shipping documents, notifications, and/or packages.

PUBLIC AIRCRAFT - An aircraft used exclusively in the service of any government or any political subdivision thereof, including the government of any state, territory, or possession of the United States, or the District of Columbia, but not including any government-owned aircraft engaged in carrying persons or property for commercial purposes. "Used exclusively in the service of means, for other than the Federal Government, an aircraft which is owned and operated by a governmental entity for other than commercial purposes or which is exclusively leased by such governmental entity for not less than 90 continuous days.

PYROPHORIC LIQUID - Any liquid that ignites spontaneously in dry or moist air at or below 130 degrees F (55 degrees C)

ROTORCRAFT - A heavier-than-air aircraft that depends principally for its support in flight on the lift generated by one or more rotors.

RUNWAY VISUAL RANGE (RVR) - An instrumentally derived value (based on standard calibration) that represents the horizontal distance a pilot will see down the runway from the approach end; it is based on the sighting of either high intensity runway lights or on the visual contrast of other targets - whichever yields the greater visual range. RVR is horizontal and not slant range visibility.

It is based on the measurement of a transmissometer made near the touchdown point of the instrument runway and is reported in hundreds of feet. RVR provides an additional operating minimum at fields equipped with specified navigational aids.

SECOND IN COMMAND - A pilot who is designated to be second in command of an aircraft during flight time.

SERIOUS INJURY - An injury which: (1) requires hospitalization for more than 48 hours, commencing with in 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, muscle or tendon damage; (4) involves any internal organ; or (5) involves second or third-degree burns, or any burns affecting more than 5 percent of the body surface. Special Flight Permit - A special authorization by the agency manager of flight operations allowing the movement of an aircraft under provisions outside of those specified in the agency's Aircraft Operations Manual.

SUBSTANTIAL DAMAGE - Damage or failure which adversely affects the structure, strength, performance, or slight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. Engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairings or cowlings, dented skin, small puncture holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips are not considered "substantial damage" for the purpose of accident reporting.

TACTICAL AIR NAVIGATION (TACAN) - A two-dimensional navigation system which provides azimuth and distance to a fixed ground station for navigation in piloted aircraft.

TRANSMISSOMETER - An apparatus used to determine visibility by measuring the transmission of light through the atmosphere. It is the measurement source for determining runway visual range (RVR) and runway visibility value (RVV).

TRANSPORTATION INDEX - A number placed on package of "Yellow Label" radioactive materials by the shipper to denote the degree of control to be exercised by the carrier. It is the measured dose rate of radiation at three feet from the surface of the package. The transportation index (TI) expresses the highest radiation rate in millirems per hour (mr/hr). Example: When the maximum is reached, the radiation rate at three feet from the surface of the package is 3 mr/hr or 3.0 TIs.

TURBOJET - A jet engine having a turbine-driven compressor and developing thrust from the exhaust of hot gases.

UNIT - "Unit" is the smallest subdivision of an organization or agency, i.e. base or locale.

VISUAL FLIGHT RULES (VFR) - A set of rules, as defined in Part 91, governing the conduct of flight under visual conditions.

VISUAL METEOROLOGICAL CONDITIONS (VMC) - The atmospheric environment is such that would allow a flight to proceed under the visual flight rules applicable to the flight. This does not preclude operating under instrument flight rules (IFR).

WINDSHEAR - The variation in space in wind direction or velocity, either in the vertical or horizontal.

2. ACRONYMS

AIM	Airmen's Information Manual
ATC	air traffic control
CB	Cumulonimbus
CFR	code of federal regulations
CRM	Cockpit Resource Management
DH	decision height
DME	distance measuring equipment
DOE	Department of Energy
DOT	Department of Transportation
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FE	flight engineer
FOEB	Flight Operations Evaluation Board
FL	Flight Level
FSS	flight service station
GCA	ground controlled approach
GW	Gross Weight
IATA	International Air Transportation Association
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules

IFTR	Individual Flight Training Record
ILS	instrument landing system
IMC	Instrument Meteorological Conditions
MAP	missed approach point
MDA	minimum descent altitude
MEA	minimum en route altitude
MEL	Minimum Equipment List
MLS	microwave landing system
MMEL	Master Minimum Equipment List
MNPS	Minimum Navigation Performance Specification
MSL	Mean Sea Level
NASA	National Aeronautics and Space Administration
NM	Nautical Mile
NOAA	National Oceanic and Atmospheric Administration
NOTAM	Notice to Airmen
NTSB	National Transportation Safety Board
OHMT	Office of Management and Budget
OMB	Office of Management and Budget
PAR	precision approach radar
PT	procedure turn
RVR	runway visual range

TACAN	tactical air navigation
TI	Technical Issuance
TSO	Technical Standard Order
VFR	visual flight rules
VMC	Visual Meteorological Conditions
VOR	very high frequency omnidirectional range
ZFW	Zero Fuel Weight

3. ABBREVIATIONS

AD	Airworthiness Directive
Bq	Becquerel
C	Centigrade
CAT I	Category 1
CAT II	Category 2
CAT III	Category 3
CO2	Carbon Dioxide
F	Fahrenheit
Haz Mat	Hazardous Materials
Km	Kilometers
lbs	Pounds
mph	Miles Per Hour
NM	Nautical Miles
Sq. in.	Square Inch

4. RESERVED FOR AGENCY-SPECIFIC INFORMATION

AGENCY
FLIGHT OPERATION STANDARDS

SUGGESTED CHAPTER OUTLINE
ICAP

APPENDIX D. ALPHABETICAL INDEX	PAGE NUMBER	CHG
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APPENDIX D. ALPHABETICAL INDEX

Suggest an alphabetical list of topics and page number to facilitate locating subjects. Similar to the following:

-A-

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-N-

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-P-

-R-

-U-

-V-

-W-

APPENDIX E. ICAO ANNEX 2

1. Suggest a text similar to ICAO Annex 2 be included for Agencies who must conduct flight in International areas.

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SUGGESTED CHAPTER OUTLINE
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APPENDIX F. AUTHORIZATIONS AND LIMITATIONS SPECIFIC TO THE AGENCY

1. Suggest text of Agency

2. Suggest special airport information for the agency area of operation.

A. SPECIAL AIRPORTS

The FAA has categorized certain airports associated with hazardous approaches, departures, or terrain as "special airports." It has recommended that the pilots in command and seconds in command of aircraft transmitting these airports become aware of any and all local hazards. This chapter provides a listing of those special airports by region.

Most agencies will operate into airports other than those in the special airports list that present hazardous approaches, departures, or terrain. These airports may be may be military airports, private airports, non-commercial airports, heliports, or uncharted airports. Each agency should identify these airports or heliports and prepare a supplement to this chapter. This supplement should identify the airport or heliport and should detail the operational hazards requiring attention.

(1) Agency Responsibility

Each operating agency shall require that all pilots in command and seconds in command become thoroughly familiar with the hazards associated with special airports prior to transmitting them. Pilots should review the approach and departure, the airport layout, and any reported hazardous terrain by a thorough study of approach and departure charts and topographical maps. Each unit director of operations shall ensure that this review is completed prior to departure.

(2) Pilot In Command Responsibility

Prior to operations to or from any airport or heliport listed in this chapter, the pilot in command shall review all available information concerning the listed special airport and should also ensure that all crewmembers have been briefed on pertinent information concerning that airport.

(3) Special Airports Program

This section provides suggested considerations when operating to and from one of the listed special airports. These considerations are also valid when operating to or from airports listed in agency supplements.

(a) Preflight Procedures

As discussed above, airport hazards should be reviewed prior to departure. Since hazards change, the most current information concerning the airport must be available for review. All parties, both crewmembers and flight following personnel, should be aware of the hazards associated with the airport to be transited during the mission.

(b) Weather Minimums

The FAA publishes instrument approach procedures for the special airports listed in this manual. The pilot in command shall comply with at least those minimums listed in the applicable approach procedure. The operating agency may further restrict these minimums. if there are no published instrument approach procedures for some of the special airports listed in the supplements to this chapter, the operating agency should establish approach minimums. These minimums may be established by the agency manager of flight operations or the individual unit director of operations. When establishing minimums for the individual airports, at least the following items should be considered:

1 Approach facility being used;
2 Aircraft category (i.e. rotorcraft, light aircraft, etc);
3 Hazardous terrain;
4 Available communication facilities;
5 Day or night operations;
6 Airport lighting; and
7 Crew qualifications.

(c) Communications

Some airports have excellent communications capabilities, while capabilities at other airports may be marginal or non-existent. The pilot in command and the flight follower should agree on the capabilities and methods of communications to be used at any particular airport. This agreement should include airborne communications and ground communications at the respective airports.

(d) Performance Considerations

Special attention should be given to aircraft performance into and out of special airports. In some cases, the operating agency may elect to further restrict performance perimeters for certain airports. This may be accomplished by restricting the maximum gross weight for operation, the maximum operating temperature, etc. These further restrictions will be at the discretion of the operating agency.

(e) Arrivals and Departures

Arrivals and departures at certain airports may be affected by many variables. The following considerations may impact arrivals and departures:

1 The time of day;
2 Weather conditions; and
3 Emergency or normal departure routes.

(f) Ground Services

The ground support services at certain airports may be limited or non-existent. the availability of ground services may impact the operation and procedures to be employed at the special airport. All parties should be aware of the ground support available prior to departure.

(g) Hazard Reporting

All aircrews, both agency and other, should be aware of the hazards associated with operations at special airports. Any change in operational hazards should be communicated without delay. Reporting may be facilitated by:

1 Using an agency-developed hazard reporting system; or
2 The NASA Hazard Reporting System.

(h) Day/Night Operations

The following airports have been identified as special airports by the FAA. Specific hazards are provided with each airport listing.

(4) Special Airports

The following airports have been identified as special airports by the FAA. Specific hazards are provided with each airport listing.

(a) Alaskan Region

Dutch Harbor, AK	Mountainous terrain
Juneau, AK	Mountainous terrain
Ketchikan, AK	Mountainous terrain on both sides of final approach

	Kodiak, AK	Airport is surrounded by mountainous terrain. Any go-around beyond ILS or ground control approach (GCA) missed approach point (MAP) will not provide obstruction clearance
	Petersburg, AK	Mountainous terrain in immediate vicinity of airport, all quadrants
	Sandpoint, AK	Mountainous terrain
	Seward, AK	Mountainous terrain in the immediate vicinity of airport
	Sitka, AK	Obstructions in missed approach, all quadrants
	Valdez, AK	Mountainous terrain in immediate vicinity of airport
	Wrangell, AK	Mountainous terrain in immediate vicinity of airport, all quadrants
(b)	U.S. Military Airports, Alaska	
	Adak, AK	Special conditions due to precipitous terrain
	Cape Lisburne AFS, AK	Mountainous terrain in approach zones; nonstandard instrument approach
	Cape Newenham AFS, AK	Runway located on mountain slope with high gradient factor; nonstandard instrument approach

	Cape Romanzof, AK	Runway located on side of mountain; mountainous terrain both sides and north end of runway
	Indian Mountain AFS, AK	Mountainous terrain
	Sparrevohn AFS, AK	Mountainous terrain
	Tatlina AFS, AK	Unique approach; mountainous terrain
(c)	Eastern Region	
	Beckley, WV	Mountainous terrain
	Bluefield, WV	Mountainous terrain
	Charleston (Kanawha), WV	Mountainous terrain
	Elmira (Chemung), NY	Mountainous terrain
	Harrisburg Int'l, PA	Mountainous terrain
	Hot Springs, VA	Mountainous terrain
	Roanoke, VA	Mountainous terrain
	Huntington, WV	Mountainous terrain
	Washington, D.C. (National)	Special arrival/ departure procedures
	Wilkes-Barre, PA	Mountainous terrain
	Binghampton, NY	Mountainous terrain
	Shenandoah Valley (Stanton-Waynesboro-Harrisonburg)	Mountainous terrain

(d)	European Region	
	Berlin, Germany	Political sensitivity of corridor adherence
	Stuttgart, Germany	Complex ATC procedures; limited approach facilities
	Moscow, USSR	Complex approach procedures
	Delhi, India	Mountainous terrain
	Sondrestrom AB, Sondre Stromfjord, Greenland	Terrain; missed approach procedures
(e)	Great Lakes Region	
	Marquette, MI	Mountainous terrain
(f)	New England Region	
	Dillant-Hopkins, NH	Mountainous terrain
	Lebanon Regional (Lebanon, NH)	Mountainous terrain
	Edward F. Knapp State (Barre, VT)	Mountainous terrain
	Burlington Int'l, VT	Mountainous terrain
(g)	Northwest	Mountain Region
	Klamah Falls, OR	Mountainous terrain
	Aspen, CO	High terrain; special procedures
	Durango, CO	High terrain; no radar, ILS

	Gunnison, CO	VOR only; uncontrolled; numerous obstructions in airport area; complex departure procedures
	Butte, MT	Numerous obstructions; all nonprecision approaches; no tower
	Yellowstone, MT	Mountainous terrain
	Missoula, MT	Mountainous terrain; special procedures
	Cody, WY	Mountainous terrain; no approach control; FSS off airport; no tower; nonprecision approaches only
	Jackson Hole, WY	Mountainous terrain; all quadrants; complex departure procedures
	Eagle, CO	Mountainous terrain
	Telluride, CO	High field elevation
	Hailey, ID (Friedman Memorial)	Mountainous terrain; special arrival/departure procedures
	Hayden, Yampa Valley, CO	Mountainous terrain; no control tower; special engine-out procedures for large aircraft
(h)	Southern Region	
	Anniston, AL	Traffic complexity
	Ashville, NC	Mountainous terrain

Beef Island, British Virgin Islands	Terrain; night procedures
Birmington, AL	Mountainous terrain
Fort DeFrance, Martinique	Terrain
Guatemala City, Guatemala	High field elevation; mountainous terrain; unique departure restrictions
Key West Florida Int'l Airport	Lake effect upon thermals on short final to 4800-foot runway
La Paz, Bolivia	High terrain requires special performance
Las Americas, Santa Domingo	No radar environment; prohibited area and San Isidro Air Base Northeast of field
Pointe-a-Pitre, Guadeloupe (in Leeward Islands)	Mountainous terrain
Quito, Ecuador	Special approach procedure
Rio de Janeiro, Barzil	Mountainous terrain; complexity of approaches; high traffic density
San Jose, Costa Rica	Mountainous terrain; unreliable navaids
St. Thomas, Virgin Islands	Mountainous terrain
Teguciagalpa, Honduras	Mountainous terrain

(i)	Southwest Region	
	Guadalajara, Mexico	High terrain; special departure procedures
(j)	Western-Pacific Region	
	Hong Kong Int'l (British Colony, S.E. China)	Special Approach; mountainous terrain
	Lihue, Kauai, HI	High terrain; mountainous to 2,300 feet within 3 miles of the localizer
	Kahului, Maui, HI	Mountainous terrain
	Burbank, CA	Mountainous terrain
	Flagstaff, AZ	Mountainous terrain
	Pago Pago (Tutuila Island, U.S.)	Mountainous terrain
	Palm Springs, CA	Mountainous terrain
	Reno, NV	High terrain
	Hilo (General Lyman),HI	Mountainous terrain
	San Diego, CA Rising terrain	close to runway
	South Lake Tahoe, CA	Unique approach
	Tribhuvan Int'l Katmandu, Nepal	Mountainous terrain; high field elevation and unique departure restriction
	Airports in the Peoples Republic of China	Limited information

(5) RESERVED FOR AGENCY-SPECIFIC INFORMATION

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