

**CIVIL AVIATION REGULATIONS**

**PART 8— OPERATIONS**

**FEDERATED STATES OF MICRONESIA**

**2001**

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# CONTENTS

<b>PART 8— OPERATIONS .....</b>	<b>8-1</b>
8.1 General.....	8-1
8.1.1 Applicability and Definitions.....	8-1
8.1.1.1 Applicability .....	8-1
8.1.1.2 Definitions.....	8-1
8.1.1.3 Acronyms .....	8-4
8.2 General Operations Requirements .....	8-5
8.2.1 Aircraft Requirements .....	8-5
8.2.1.1 Registration Markings.....	8-5
8.2.1.2 Civil Aircraft Airworthiness.....	8-5
8.2.1.3 Special Airworthiness Certificate Operational Restrictions.....	8-6
8.2.1.4 Aircraft Instruments and Equipment .....	8-6
8.2.1.5 Inoperative Instruments and Equipment.....	8-6
8.2.1.6 Civil Aircraft Flight Manual, Marking and Placard Requirements.....	8-7
8.2.1.7 Required Aircraft and Equipment Inspections .....	8-7
8.2.1.8 Documents to be Carried on Aircraft— All Operations .....	8-8
8.3 Aircraft Maintenance Requirements .....	8-9
8.3.1.1 Applicability .....	8-9
8.3.1.2 General.....	8-10
8.3.1.3 maintenance required.....	8-10
8.3.1.4 Inspections .....	8-10
8.3.1.5 Changes To Aircraft Maintenance inspection Programmes .....	8-12
8.3.1.6 inspections: all other aircraft.....	8-13
8.3.1.7 content, form, and disposition of maintenance, preventive maintenance, rebuilding, and modification records.....	8-13
8.3.1.8 Maintenance Records Retention .....	8-14
8.3.1.9 Transfer of Maintenance Records .....	8-15
8.4 Flightcrew Requirements.....	8-15
8.4.1.1 Composition of the Flightcrew .....	8-15
8.4.1.2 Flightcrew Qualifications.....	8-15
8.4.1.3 Authorization in Lieu of a Type Rating.....	8-16
8.4.1.4 Licenses Required.....	8-16
8.4.1.5 AIRMAN— Limitations on Use of Services for Commercial Air Transport.....	8-16
8.4.1.6 Rating Required for IFR Operations .....	8-17
8.4.1.7 Special Authorization Required for Category II/III Operations .....	8-17
8.4.1.8 Pilot Logbooks .....	8-17
8.4.1.9 PIC Currency— Takeoff and Landings .....	8-17
8.4.1.10 Pilot Currency: IFR Operations.....	8-18
8.4.1.11 Pilot Currency— General Aviation Operations .....	8-18
8.4.1.12 Pilot Privileges and Limitations .....	8-19
8.5 Crewmember Duties and Responsibilities .....	8-19
8.5.1.1 Authority and Responsibility of the PIC .....	8-19
8.5.1.2 Compliance with Local Regulations.....	8-19
8.5.1.3 Negligent or Reckless Operations of the Aircraft.....	8-20
8.5.1.4 Fitness of Flight crewmembers [reserved].....	8-20
8.5.1.5 Prohibition on Use of Psychoactive Substances, including narcotics, drugs or Alcohol .....	8-20
8.5.1.6 crewmember Use of Seat Belts and Shoulder Harnesses.....	8-20
8.5.1.7 Flight crewmembers at Duty Stations [reserved].....	8-21

8.5.1.8	Required Crewmember Equipment .....	8-21
8.5.1.9	Compliance with Checklists .....	8-21
8.5.1.10	Search and Rescue Information .....	8-21
8.5.1.11	Production of Aircraft and Flight Documentation .....	8-21
8.5.1.12	Locking of Flight Deck Compartment Door: Commercial Air Transport .....	8-21
8.5.1.13	Admission to the Flight Deck— Commercial Air Transport.....	8-22
8.5.1.14	Admission of Inspector to the Flight Deck .....	8-22
8.5.1.15	Duties During Critical Phases of Flight: Commercial Air Transport .....	8-22
8.5.1.16	Manipulation of the Controls— Commercial Air Transport .....	8-22
8.5.1.17	Simulated Abnormal Situations in Flight: Commercial Air Transport .....	8-23
8.5.1.18	Completion of the Technical Log— Commercial Air Transport.....	8-23
8.5.1.19	Reporting Mechanical Irregularities .....	8-23
8.5.1.20	Reporting of Facility and Navigation Aid Inadequacies .....	8-23
8.5.1.21	Reporting of Hazardous Conditions.....	8-23
8.5.1.22	Reporting of Incidents.....	8-23
8.5.1.23	Accident Notification .....	8-24
8.5.1.24	Operation of Cockpit Voice and Flight Data Recorders .....	8-24
8.5.1.25	Crewmember Oxygen— Minimum Supply and Use .....	8-25
8.5.1.26	Portable Electronic Devices.....	8-25
8.6	Flight Planning and Supervision .....	8-25
8.6.1	Flight Plans .....	8-26
8.6.1.1	Submission of a Flight Plan .....	8-26
8.6.1.2	Air Traffic Control Flight Plan— Commercial Air Transport .....	8-26
8.6.1.3	Contents of a Flight Plan .....	8-26
8.6.1.4	Planned Reclearance .....	8-27
8.6.1.5	Changes to a Flight Plan .....	8-27
8.6.1.6	Closing a Flight Plan.....	8-28
8.6.2	Flight Planning and Preparation .....	8-28
8.6.2.1	Aircraft Airworthiness and Safety Precautions.....	8-28
8.6.2.2	Adequacy of Operating Facilities.....	8-29
8.6.2.3	Weather Reports and Forecasts.....	8-29
8.6.2.4	Weather Limitations for VFR Flights.....	8-29
8.6.2.5	IFR Destination Aerodromes .....	8-29
8.6.2.6	IFR Destination Alternate Requirement.....	8-30
8.6.2.7	IFR Alternate Aerodrome Selection Criteria .....	8-30
8.6.2.8	OffShore Alternates for Helicopter Operations [RESERVED] .....	8-31
8.6.2.9	Takeoff Alternate Aerodromes— Commercial Air Transport Operations.....	8-31
8.6.2.10	Maximum Distance from an Adequate Aerodrome for Twin-engined Airplanes Without an ETOPS Approval .....	8-31
8.6.2.11	Extended Range Operations with Twin-Engined Airplanes .....	8-32
8.6.2.12	En Route Alternate Aerodromes— ETOPS Operations .....	8-33
8.6.2.13	Fuel, Oil, and Oxygen Planning and Contingency Factors .....	8-33
8.6.2.14	Minimum Fuel Supply for VFR Flights .....	8-34
8.6.2.15	Minimum Fuel Supply for IFR Flights .....	8-35
8.6.2.16	Flight Planning Document Distribution and Retention— Commercial Air Transport.....	8-35
8.6.2.17	Aircraft Loading, Mass and Balance.....	8-36
8.6.2.18	Maximum Allowable Mass to be Considered on All Load Manifests.....	8-36
8.6.2.19	Flight Release Required—Commercial Air Transport.....	8-36
8.6.2.20	Operational Flight Plan: Commercial Air Transport .....	8-37
8.7	Aircraft Operating and Performance Limitations .....	8-37
8.7.1	All Aircraft.....	8-37

8.7.1.1	Applicability .....	8-37
8.7.1.2	General.....	8-37
8.7.1.3	Aircraft Performance Calculations .....	8-37
8.7.1.4	General weight and Obstruction Clearance Limitations .....	8-38
8.7.2	Aircraft Used in Commercial Air Transport .....	8-38
8.7.2.1	Applicability .....	8-38
8.7.2.2	General.....	8-38
8.7.2.3	Aircraft Performance Calculations .....	8-39
8.7.2.4	Takeoff limitations.....	8-40
8.7.2.5	En Route Limitations: All Engines Operating.....	8-40
8.7.2.6	En Route Limitations: One Engine Inoperative.....	8-41
8.7.2.7	En Route Limitations—Two Engines Inoperative .....	8-41
8.7.2.8	Landing Limitations.....	8-42
8.8	Flight Rules.....	8-43
8.8.1	All Operations.....	8-43
8.8.1.1	Operation of Aircraft on the Ground .....	8-43
8.8.1.2	Takeoff Conditions.....	8-43
8.8.1.3	Flight into Known or Expected Icing (reserved).....	8-44
8.8.1.4	Altimeter Settings .....	8-44
8.8.1.5	Minimum Safe Altitudes—General .....	8-44
8.8.1.6	Minimum Safe VFR Altitudes: commercial air transport operations.....	8-44
8.8.1.7	Instrument Approach Operating Minima .....	8-45
8.8.1.8	Category II and III Operations: General Operating Rules .....	8-45
8.8.1.9	Category II and Category III Manual.....	8-46
8.8.1.10	authorization for deviation from certain category II OPERATIONS .....	8-46
8.8.1.11	Diversion Decision.....	8-46
8.8.1.12	Operating Near Other Aircraft.....	8-47
8.8.1.13	Right-of-Way Rules—Except Water Operations .....	8-47
8.8.1.14	Right-of-Way Rules: Water Operations[reserved] .....	8-48
8.8.1.15	Use of Aircraft Lights .....	8-48
8.8.1.16	simulated instrument flight.....	8-49
8.8.1.17	inflight simulation of abnormal situations .....	8-49
8.8.1.18	<i>dropping, spraying, towing</i> .....	8-49
8.8.1.19	aerobatic flight .....	8-49
8.8.1.20	flight test areas .....	8-50
8.8.1.21	prohibited areas and restricted areas .....	8-50
8.8.1.22	Operations in MNPs or RVSM airspace .....	8-50
8.8.1.23	operations on or in the vicinity of an uncontrolled aerodrome .....	8-50
8.8.1.24	aerodrome traffic altitudes: turbojet, turbofan, or large aircraft.....	8-51
8.8.1.25	compliance with visual and electronic glide slopes.....	8-51
8.8.1.26	restriction or suspension or operations: commercial air transport .....	8-51
8.8.1.27	continuation of flight when destination aerodrome is temporarily restricted: commercial air transport .....	8-51
8.8.1.28	interception.....	8-51
8.8.2	Control of Air Traffic .....	8-52
8.8.2.1	ATC Clearances .....	8-52
8.8.2.2	Adherence to ATC Clearances .....	8-52
8.8.2.3	Communications.....	8-52
8.8.2.4	Route to be Flown .....	8-53
8.8.2.5	Inadvertent Changes .....	8-53
8.8.2.6	ATC Clearance :Intended Changes.....	8-53

8.8.2.7	Position Reports .....	8-54
8.8.2.8	Operations on or in the Vicinity of a Controlled Aerodrome .....	8-54
8.8.2.9	Unlawful Interference .....	8-54
8.8.2.10	Time Checks .....	8-55
8.8.2.11	Universal Signals .....	8-55
8.8.3	VFR Flight Rules .....	8-55
8.8.3.1	Visual Meteorological Conditions .....	8-55
8.8.3.2	VFR Weather Minimums for Takeoff and Landing .....	8-56
8.8.3.3	Special VFR Operations .....	8-56
8.8.3.4	VFR Cruising Altitudes .....	8-56
8.8.3.5	ATC Clearances for VFR Flights .....	8-57
8.8.3.6	VFR Flights Requiring ATC Authorization .....	8-57
8.8.3.7	Weather Deterioration Below VMC .....	8-57
8.8.3.8	Changing from VFR to IFR .....	8-57
8.8.3.9	Two-way Radio Communication Failure in VFR .....	8-58
8.8.4	IFR Flight Rules .....	8-58
8.8.4.1	IFR in Controlled Airspace .....	8-58
8.8.4.2	IFR Flights Outside Controlled Airspace .....	8-58
8.8.4.3	IFR Takeoff Minimums for Commercial Air Transport .....	8-58
8.8.4.4	Minimum Altitudes for IFR Operations .....	8-58
8.8.4.5	Minimum Altitudes for Use of an Autopilot .....	8-59
8.8.4.6	IFR Cruising Altitude or Flight Level in Controlled Airspace .....	8-59
8.8.4.7	IFR Cruising Altitude or Flight Level in Uncontrolled Airspace .....	8-60
8.8.4.8	IFR Radio Communications .....	8-60
8.8.4.9	Operation Under IFR in Controlled Airspace: Malfunction Reports .....	8-60
8.8.4.10	Continuation of IFR Flight Toward a Destination .....	8-60
8.8.4.11	Instrument Approach Procedures and IFR Landing Minimums .....	8-61
8.8.4.12	Commencing an Instrument Approach: Commercial Air Transport .....	8-61
8.8.4.13	Instrument Approaches to Civil Aerodromes .....	8-61
8.8.4.14	Operation Below DH or MDA .....	8-62
8.8.4.15	Landing During Instrument Meteorological Conditions .....	8-62
8.8.4.16	Execution of a Missed Approach Procedure .....	8-62
8.8.4.17	Change from IFR Flight to VFR Flight .....	8-63
8.8.4.18	Two-Way Radio Communications Failure in IFR .....	8-63
8.9	Passengers and Passenger Handling .....	8-64
8.9.1	All Passenger Carrying Operations .....	8-64
8.9.1.1	Unacceptable Conduct .....	8-64
8.9.1.2	Refuelling with Passengers on board .....	8-64
8.9.1.3	Passenger Seats, Safety Belts, and Shoulder Harnesses .....	8-64
8.9.1.4	Passenger Briefing .....	8-65
8.9.1.5	Inflight Emergency Instruction .....	8-65
8.9.1.6	Passenger Oxygen— Minimum Supply and Use .....	8-65
8.9.1.7	Alcohol or Drugs .....	8-66
8.9.2	Commercial Air Transport Passenger Carrying Operations .....	8-66
8.9.2.1	Passenger Compliance with Instructions .....	8-66
8.9.2.2	Denial of Transportation .....	8-66
8.9.2.3	Carriage of Persons Without Compliance with these Passenger-Carrying Requirements .....	8-66
8.9.2.4	Cabin attendant at Duty Stations [reserved] .....	8-67
8.9.2.5	Evacuation Capability .....	8-67
8.9.2.6	Arming of Automatic Emergency Exits .....	8-67
8.9.2.7	Accessibility of Emergency Exits and Equipment .....	8-67



8.9.2.8	Stops Where Passengers Remain onboard .....	8-67
8.9.2.9	Carriage of Persons with Reduced Mobility .....	8-67
8.9.2.10	Exit Row Seating .....	8-68
8.9.2.11	PROHIBITION Against Carriage of Weapons .....	8-68
8.9.2.12	Oxygen for Medical Use by Passengers.....	8-68
8.9.2.13	carry-on baggage .....	8-68
8.9.2.14	carriage of cargo in passenger compartments .....	8-69
8.9.2.15	passenger information signs.....	8-69
8.9.2.16	required passenger briefings .....	8-69
8.9.2.17	passenger briefing: extended overwater operations .....	8-69
8.9.2.18	Passenger Seat belts .....	8-70
8.9.2.19	passenger seat backs.....	8-70
8.9.2.20	Stowage of Food, Beverage and Passenger Service .....	8-70
8.9.2.21	Securing of Items of Mass in Passenger Compartment .....	8-70
8.10	Crewmember and Flight Operations Officer Qualifications: Commercial Air Transport .....	8-71
8.10.1.2	PIC License requirements: turbojet, turbofan, or large aircraft.....	8-71
8.10.1.3	pic License Requirements: non turbojet or turbofan small aeroplanes .....	8-71
8.10.1.4	pic aeronautical experience: small aeroplanes .....	8-71
8.10.1.5	sic license requirements .....	8-72
8.10.1.6	fe license requirements [reserved] .....	8-72
8.10.1.7	one pilot qualified to perform fe functions [reserved] .....	8-72
8.10.1.8	Persons Qualified to Flight Release .....	8-72
8.10.1.9	Company Procedures Indoctrination .....	8-72
8.10.1.10	Initial Dangerous Goods Training [reserved] .....	8-73
8.10.1.11	Initial Security Training [reserved] .....	8-73
8.10.1.12	Initial Crew Resource Management .....	8-73
8.10.1.13	Initial Emergency Equipment Drills [reserved] .....	8-73
8.10.1.14	Initial Aircraft Ground Training .....	8-73
8.10.1.15	Initial Aircraft Flight Training [reserved] .....	8-74
8.10.1.16	Initial Specialized Operations Training .....	8-74
8.10.1.17	Aircraft Differences .....	8-74
8.10.1.18	use of simulators .....	8-74
8.10.1.19	Introduction of New Equipment or Procedures .....	8-75
8.10.1.20	Aircraft and Instrument Proficiency Checks.....	8-75
8.10.1.21	Re-establishing Recency of Experience— Flightcrew .....	8-75
8.10.1.22	Pairing of Low Experience Crewmembers.....	8-76
8.10.1.23	Flight Engineer and flight navigator Proficiency Checks [reserved].....	8-76
8.10.1.24	Competence Checks— Cabin attendants [reserved].....	8-76
8.10.1.25	Competence Checks— Flight Operations Officers .....	8-76
8.10.1.26	Supervised Line Flying— Pilots .....	8-76
8.10.1.27	Supervised Line Flying—Flight Engineers [reserved].....	8-77
8.10.1.28	Supervised Line Experience— Cabin attendants [reserved] .....	8-77
8.10.1.29	Line Observations— Flight Operations Officers .....	8-77
8.10.1.30	Route and Area Checks— Pilot Qualification .....	8-77
8.10.1.31	PIC Low Minimums Authorization.....	8-77
8.10.1.32	Designated Special Aerodromes and Heliports—PIC Qualification.....	8-78
8.10.1.33	Recurrent Training— Flight crewmembers [reserved].....	8-78
8.10.1.34	Recurrent Training—Cabin attendants [reserved] .....	8-78
8.10.1.35	Recurrent Training— Flight Operations Officers.....	8-78
8.10.1.36	check airman training .....	8-79

No person may serve nor may any AOC holder use a person as a check airman unless he or she has completed the curricula approved by the authority for those functions for which they are to serve. .... 8-79

8.10.1.37 Flight Instructor training [reserved] ..... 8-79

8.10.1.38 Flight Instructor qualification [reserved] ..... 8-79

8.10.1.39 Check Airman pilot Qualifications ..... 8-79

8.10.1.40 Check Airman Designation ..... 8-79

8.10.1.41 Check Airman limitations ..... 8-79

8.10.1.42 substitution of simulator experience ..... 8-80

8.10.1.43 line quALIFICATION: CHECK AIRMAN AND INSTRUCTOR ..... 8-80

8.10.1.44 Termination of a Proficiency, Competence or Line Check ..... 8-80

8.10.1.45 Recording of Crewmember Qualifications ..... 8-80

8.10.1.46 Monitoring of Training and Checking Activities ..... 8-80

8.10.1.47 Eligibility Period ..... 8-81

8.10.1.48 Reductions in Requirements ..... 8-81

8.11 Rest Periods, Duty, And Flight Time: Commercial Air Transport ..... 8-81

8.11.1.1 Applicability ..... 8-81

8.11.1.2 compliance with scheduling requirements ..... 8-82

8.11.1.3 Duty and Rest Periods [reserved] ..... 8-82

8.11.1.4 Duty Aloft [reserved] ..... 8-82

8.11.1.5 Maximum Number of Flight Time Hours [reserved] ..... 8-82

8.11.1.6 Special Flight Duty Schemes [reserved] ..... 8-82

8.12 Flight Release— Commercial Air Transport ..... 8-82

8.12.1.1 Applicability ..... 8-82

8.12.1.2 Qualified Persons Required for Operational Control Functions ..... 8-82

8.12.1.3 Functions Associated with Operational Control ..... 8-82

8.12.1.4 Operational Control Duties ..... 8-83

8.12.1.5 Contents of a Flight Release/Operational Flight Plan ..... 8-83

8.12.1.6 Flight Release— Aircraft Requirements ..... 8-84

8.12.1.7 Flight Release—Facilities and NOTAMs ..... 8-84

8.12.1.8 weather reports and forecasts ..... 8-84

8.12.1.9 Flight Release in Icing Conditions [reserved] ..... 8-85

8.12.1.10 Flight Release—under VFR or IFR ..... 8-85

8.12.1.11 Flight Release— Minimum Fuel Supply ..... 8-85

8.12.1.12 Flight Release—Aircraft Loading and Performance ..... 8-85

8.12.1.13 Flight Release—Amendment or Re-release En Route ..... 8-85

8.12.1.14 Flight Release with Airborne Weather Radar Equipment ..... 8-85

## 8.1 GENERAL

### 8.1.1 APPLICABILITY AND DEFINITIONS

#### 8.1.1.1 APPLICABILITY

- (a) Part 8 prescribes the requirements for:
- (1) Operations conducted by flight crewmember certified in Federated States of Micronesia while operating aircraft registered in Federated States of Micronesia.
  - (2) Operations of foreign aircraft registered in another State by Federated States of Micronesia AOC holders.
  - (3) Operations of aircraft within Federated States of Micronesia by flightcrew or AOC holders of another State.
- (b) For operations outside of Federated States of Micronesia, all Federated States of Micronesia pilots and operators shall comply with these requirements unless compliance would result in a violation of the laws of the State in which the operation is conducted.

*Note: Where a particular requirement is applicable only to a particular segment of aviation operations, it will be identified by a reference to those particular operations, such as “commercial air transport” or “small non-turbojet or turbofan airplanes.”*

*Note: Those specific subsections not applicable to operators of other States will include the phrase “This requirement is not applicable for foreign operators.”*

#### 8.1.1.2 DEFINITIONS

- (a) For the purpose of Part 8, the following definitions shall apply—
- (1) **Advisory airspace.** An airspace of defined dimensions, or designated route, within which air traffic advisory service is available.
  - (2) **Aerial Work.** An aircraft operation in which an aircraft is used for specialised services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.
  - (3) **Aerobatic flight.** Maneuvers intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.
  - (4) **Air navigation facility.** Any facility used in, available for use in, or designed for use in aid of air navigation, including aerodromes, landing areas, lights, any apparatus or equipment for disseminating weather information, for signalling, for radio directional finding, or for radio or other electrical communication, and any other structure or mechanism having a similar purpose for guiding or controlling flight in the air or the landing and take-off of aircraft.
  - (5) **Calendar day.** The period of elapsed time, using Co-ordinated Universal Time or local time, which begins at midnight and ends 24 hours later in the next midnight.

- (6) **Check airman (airplane).** A person who is qualified, and permitted, to conduct an evaluation in an airplane, in a flight simulator training device for a particular type of airplane, for a particular AOC holder.
- (7) **Check airman (simulator).** A person who is qualified to conduct an evaluation, but only in a flight simulation training device for a particular type of aircraft, for a particular AOC holder.
- (8) **Controlled flight.** Any flight which is subject to an ATC clearance.
- (9) **Critical engine.** The engine whose failure would most adversely affect the performance or handling qualities of an aircraft.
- (10) **Critical phases of flight.** Those portions of operations involving taxiing, takeoff and landing, and all flight operations below 10,000 ft, except cruise flight.
- (11) **Deadhead Transportation.** Time spent in transportation on aircraft (at the insistence of the AOC holder) to or from a crewmember's home station.
- (12) **Defined point after takeoff.** The point, within the takeoff and initial climb phase, before which the Class 2 helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.
- (13) **Defined point before landing.** The point, within the approach and landing phase, after which the Class 2 helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.
- (14) **Effective length of the runway.** The distance for landing from the point at which the obstruction clearance plane associated with the approach end of the runway intersects the centerline of the runway to the far end.
- (15) **Extended overwater operation.** With respect to aircraft other than helicopters, an operation over water at a horizontal distance of more than 50 nm from the nearest shoreline; and to helicopters, an operation over water at a horizontal distance of more than 50 nm from the nearest shoreline and more than 50 nm from an offshore heliport structure.
- (16) **Flight Duty Period.** The total time from the moment a flight crewmember commences duty, immediately subsequent to a rest period and before making a flight or a series of flights, to the moment the flight crewmember is relieved of all duties having completed such flight or series of flights.
- (17) **Flight plan.** Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft. The term "flight plan" is used to mean variously, full information on all items comprised in the flight plan description, covering the whole route of a flight, or limited information required when the purpose is to obtain a clearance for a minor portion of a flight such as to cross an airway, to take off from, or to land at a controlled aerodrome.
- (18) **General aviation operation.** An aircraft operation other than a commercial air transport operation or an aerial work operation.
- (19) **Helideck.** A heliport located on a floating or fixed offshore structure.

- (20) **Helipport.** An aerodrome or defined area on a structure intended to be used wholly or in part for the arrival, departure, and surface movement of helicopters.
- (21) **Journey log.** A form signed by the PIC of each flight that records the airplane's registration, crewmember names and duty assignments, the type of flight, and the date, place, and time of arrival and departure.
- (22) **Landing decision point.** The point used in determining landing performance from which, an engine failure occurring at this point, the landing may be safely continued or a balked landing initiated.
- (23) **Line operating flight time.** Flight time recorded by the PIC or Co-Pilot while in revenue service for an AOC holder.
- (24) **Master Minimum Equipment List (MMEL).** A list established for a particular aircraft type by the manufacturer with the approval of the State of Design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations, or procedures. The MMEL provides the basis for development, review, and approval by the Authority of an individual operator's MEL.
- (25) **Obstruction clearance plane.** A plane sloping upward from the runway at a slope of 1:20 to the horizontal, and tangent to or clearing all obstructions within a specified area surrounding the runway as shown in a profile view of that area. In the plane view, the centerline of the specified area coincides with the centerline of the runway, beginning at the point where the obstruction clearance plane intersects the centerline of the runway and proceeding to a point at least 1,500 ft from the beginning point. Thereafter, the centerline coincides with the takeoff path over the ground for the runway (in the case of takeoffs) or with the instrument approach counterpart (for landings), or where the applicable one of these paths has not been established, it proceeds consistent with turns of at least 4,000 foot radius until a point is reached beyond which the obstruction clearance plane clears all obstructions. This area extends laterally 200 ft on each side of the centerline at the point where the obstruction clearance plane intersects the runway and continues at this width to the end of the runway; then it increases uniformly to 500 ft on each side of the centerline at a point 1,500 ft from the intersection of the obstruction clearance plane with the runway; thereafter, it extends laterally 500 ft on each side of the centerline.
- 14 CFR: 121.171 (c)*
- (26) **Operational flight plan.** The operator's plan for the safe conduct of the flight based on considerations of aircraft performance, other operating limitations, and relevant expected conditions on the route to be followed and at the aerodromes or heliports concerned.
- (27) **Passenger exit seats.** Those seats having direct access to an exit, and those seats in a row of seats through which passengers would have to pass to gain access to an exit, from the first seat inboard of the exit to the first aisle inboard of the exit. A passenger seat having "direct access" means a seat from which a passenger can proceed directly to the exit without entering an aisle or passing around an obstruction.
- (28) **Rest period.** Any period of time on the ground during which a flight crewmember is relieved of all duties by the operator.

- (29) **Takeoff decision point.** The point used in determining takeoff performance of a Class 1 helicopter from which, an engine failure occurring at this point, either a rejected takeoff may be made or a takeoff safely continued.

### 8.1.1.3 ACRONYMS

- (a) The following acronyms are used in Part 8:
- (1) AFM— Airplane Flight Manual.
  - (2) AGL—Above Ground Level.
  - (3) AOC— Air Operator Certificate.
  - (4) AOM—Aircraft Operating Manual.
  - (5) APU —Auxiliary Power Unit.
  - (6) ATC—Air Traffic Control.
  - (7) CAT—Category.
  - (8) CDL—Configuration Deviation List.
  - (9) CRM— Crew Resource Management.
  - (10) DH – Decision Height.
  - (11) ETA—Estimated Time of Arrival.
  - (12) ETOPS—Extended Range Operations by Twin-Engined Airplanes.
  - (13) FE— Flight Engineer.
  - (14) FL— Flight Level.
  - (15) FN—Flight Navigator.
  - (16) GPS—Global Positioning System.
  - (17) IMC— Instrument Meteorological Conditions.
  - (18) INS— Inertial Navigation System.
  - (19) LDA—Localizer-type Directional Aid.
  - (20) LOC—Localizer.
  - (21) LORAN—Long-range Navigation.
  - (22) LVTO—Low Visibility Take Off.
  - (23) MDA— Minimum Decent Altitude.

- (24) MEA— Minimum En Route Altitude.
- (25) MEL—Minimum Equipment List.
- (26) MMEL— Master Minimum Equipment List.
- (27) MOCA — Minimum Obstruction Clearance Altitude.
- (28) NOTAM — Notice to Airmen.
- (29) RFM— Rotorcraft Flight Manual.
- (30) RVR — Runway Visibility Range.
- (31) RVSM—Reduced Vertical Separation Minimum.
- (32) PBE—Protective Breathing Equipment.
- (33) PIC—Pilot in Command.
- (34) SIC—Second in Command
- (35) SCA—Senior Cabin Crewmember.
- (36) SM—Statute Miles.
- (37) TACAN—Tactical Air Navigation System.
- (38) VMC— Visual Meteorological Conditions.
- (39) VSM— Vertical Separation Minimum.
- (40)  $V_1$ —Takeoff decision speed.
- (41)  $V_{mo}$ —Maximum operating speed.
- (42)  $V_{so}$ —Stalling speed or the minimum steady flight speed in the landing configuration.

## **8.2 GENERAL OPERATIONS REQUIREMENTS**

### **8.2.1 AIRCRAFT REQUIREMENTS**

#### **8.2.1.1 REGISTRATION MARKINGS**

No person may operate a Federated States of Micronesia-registered aircraft unless it displays the proper markings prescribed in Part 4.

*14 CFR: 45.21(a)*

#### **8.2.1.2 CIVIL AIRCRAFT AIRWORTHINESS**

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

- (b) Each PIC shall determine whether an aircraft is in a condition for safe flight.
- (c) The PIC shall discontinue a flight as soon as practicable when an unairworthy mechanical, electrical, or structural condition occurs.

14 CFR: 91.7

### 8.2.1.3 SPECIAL AIRWORTHINESS CERTIFICATE OPERATIONAL RESTRICTIONS

No person may operate an aircraft with a special airworthiness certificate except as provided in the limitations issued with that certificate.

14 CFR: 91.313, 91.317, 91.319

### 8.2.1.4 AIRCRAFT INSTRUMENTS AND EQUIPMENT

No person may operate an aircraft unless it is equipped with the required instruments and navigation equipment appropriate to type of flight operation conducted and the route being flown.

*Note: The instruments and equipment required for specific operations are listed in Part 7.*

14 CFR: 91.205(a), 121.303

### 8.2.1.5 INOPERATIVE INSTRUMENTS AND EQUIPMENT

- (a) No person may takeoff in an aircraft with inoperative instruments or equipment installed, except as authorized by the Authority.
- (b) An AOC Holder shall not operate a multi-engine aircraft with inoperative instruments and equipment installed unless the following conditions are met:
  - (1) An approved MEL exists for that aircraft.
  - (2) The Authority has issued the AOC Holder operations specifications authorising operations in accordance with an approved MEL. The flightcrew shall have direct access at all times before flight to all of the information contained in the approved MEL through printed or other means approved by the Authority in the AOC Holder specific operating provisions. An approved MEL, as authorized by the specific operating provisions, constitutes an approved change to the type design without requiring recertification.
  - (3) The approved MEL must:
    - (i) Be prepared in accordance with the limitations specified in paragraph (c) of this section.
    - (ii) Provide for the operation of the aircraft with certain instruments and equipment in an inoperative condition.
  - (4) Records identifying the inoperative instruments and equipment and the information required by paragraph (b)(3)(ii) of this section must be available to the pilot.
  - (5) The aircraft is operated under all applicable conditions and limitations contained in the MEL and the specific operating provisions authorising use of the MEL.
- (c) The following instruments and equipment may not be included in the MEL:



- (1) Instruments and equipment that are either specifically or otherwise required by the airworthiness requirements under which the aircraft is type certificated and which are essential for safe operations under all operating conditions.
  - (2) Instruments and equipment required by an airworthiness directive to be in operable condition unless the airworthiness directive provides otherwise.
  - (3) Instruments and equipment required for specific operations under Part 7, Part 8, and/or Part 9 of these regulations.
- (d) Notwithstanding paragraphs (c)(1) and (c)(3) of this section, an aircraft with inoperative instruments or equipment may be operated under a special flight permit under § 5.4.1.11 of these regulations

Note: Implementing standard: See Error! Reference source not found for specific limitation on inoperative instruments and equipment.

*ICAO Annex 6, Part I: 6.1.1; 6.1.2,  
ICAO Annex 6, Part II: 4.4.1(b),  
ICAO Annex 6, Part III, Section II: 4.1.1; 4.1.2; Annex 6, Part III, Section III: 2.4(b); 4.1.1; 4.1.2  
14 CFR: 91.213, 121.628, 125.201, 135.143  
JAR-OPS: 1.030*

#### 8.2.1.6 CIVIL AIRCRAFT FLIGHT MANUAL, MARKING AND PLACARD REQUIREMENTS

- (a) No person may operate a Federated States of Micronesia-registered civil aircraft unless there is available in the aircraft—
  - (1) A current, approved AFM or RFM; or
  - (2) An AOM approved by the Authority for the AOC holder;
  - (3) If no AFM or RFM exists, approved manual material, markings and placards, or any combination thereof, which provide the PIC with the necessary limitations for safe operation.
- (b) No person may operate a civil aircraft within or over Federated States of Micronesia without complying with the operating limitations specified in the approved AFM or RFM, markings and placards, or as otherwise prescribed by the certifying authority for the aircraft's State of Registry.
- (c) Each operator shall display in the aircraft all placards, listings, instrument markings or combination thereof, containing those operating limitations prescribed by the certifying authority for the aircraft's State of Registry for visual presentation.

*ICAO Annex 6, Part I: 5.2.3, 11.1,  
ICAO Annex 6, Part II: 5.1(a)(b), 5.2,  
ICAO Annex 6, Part III, Section II: 3.2.3, 9.1, Annex 6, Part III, Section III: 3.1(a)(b), 3.2  
14 CFR: 91.9*

#### 8.2.1.7 REQUIRED AIRCRAFT AND EQUIPMENT INSPECTIONS

- (a) Unless otherwise authorized by the Authority, no person may operate a Federated States of Micronesia civil aircraft unless it has had the following inspections—
  - (1) An annual inspection within the past 12 calendar months;
  - (2) For remuneration or hire operations, a 100-hour inspection

- (3) For IFR operations, an altimeter and pitot-static system inspection in the past 24 calendar months;
  - (4) For transponder equipped aircraft, a transponder check within the past 12 calendar months; and
  - (5) For ELT-equipped aircraft, an ELT check within the past 12 calendar months.
- (b) Aircraft maintained under an alternate maintenance and inspection program approved by the authority, as specified in 5.7.1.3 (a), may not have current annual or 100-hour inspections in their maintenance records.

Note: An “alternate maintenance and inspection program” may include a manufacturer’s recommended program, instructions for continued airworthiness, or a program designed by the operator and approved by the authority.

Note: The requirements of these inspections are provided in Part 5.

*ICAO Annex 8, Part II: 4.2.1; 4.2.2  
ICAO Doc 9760, Airworthiness Manual, Vol. 2, Chapter 2: 2.1  
14 CFR: 91.409, 91.411, 91.413*

#### **8.2.1.8 DOCUMENTS TO BE CARRIED ON AIRCRAFT— ALL OPERATIONS**

- (a) Except as provided in § 8.2.1.6, no person may operate a civil aircraft in commercial air transport operations unless it has within it the following current and approved documents:
- (1) Certificate of Aircraft Registration issued to the owner.
  - (2) Certificate of Airworthiness.
  - (3) Aircraft Journey Log.
  - (4) Aircraft Radio License.
  - (5) List of passenger names and points of embarkation and destination, if applicable.
  - (6) Cargo manifest including special loads information.
  - (7) Aircraft Technical Log.
  - (8) AOC, if required.
  - (9) Noise Certificate, if required.
  - (10) AFM or RFM, for airplanes or helicopters.
  - (11) Part(s) of the Operations Manual relevant to operation(s) conducted.
  - (12) MEL.
  - (13) Category II or III Manual, as applicable.
  - (14) Operational Flight Plan, for all international flights.

- (15) Filed ATC flight plan.
- (16) NOTAMS briefing documentation.
- (17) Meteorological information.
- (18) Mass and balance documentation.
- (19) Roster of special situation passengers.
- (20) Maps and charts for routes of proposed flight or possibly diverted flights.
- (21) Forms for complying with the reporting requirements of the Authority and the AOC holder.
- (22) For international flights, a general declaration for customs.
- (23) Any documentation that may be required by the Authority or States concerned with a proposed flight.

*Note: "Special situation passengers" includes armed security personnel, deportees, persons in custody, and persons with special medical needs.*

*Note: The noise certificate shall state the standards in ICAO Annex 16, Volume 1. The statement may be contained in any document, carried on board, approved by the Authority.*

ICAO Convention Article 29;  
 ICAO Annex 2: 3.3.1.2(e)  
 ICAO Annex 6, Part I: 6.1.3; 6.2.3  
 ICAO Annex 6, Part II: 6.1.1; 6.1.2.1.1(d)(1)(2)  
 ICAO Annex 6, Part III, Section II: 4.1.1; 4.1.3; 4.2.3; 4.11(f); Annex 6, Part III, Section III: 4.1.1; 4.1.3.1.(d)(1)&(2)  
 ICAO Annex 7: 7.2  
 14 CFR: 91.203(a)&(b)  
 JAR-OPS: 1.125(a)

## 8.3 AIRCRAFT MAINTENANCE REQUIREMENTS

### 8.3.1.1 APPLICABILITY

- (a) This Subpart prescribes the rules governing the maintenance and inspection of Federated States of Micronesia registered civil aircraft operating within or outside Federated States of Micronesia.
- (b) Subsections 8.3.1.3 and 8.3.1.4 do not apply to aircraft subject to an approved continuous maintenance program approved by the authority for an AOC holder in Part 9.
- (c) This subpart applies to all aircraft, as designated below, operated as commercial air transport in Federated States of Micronesia.
- (d) This subpart applies to all general aviation large, complex aircraft operated in Federated States of Micronesia, whether or not the aircraft is registered in Federated States of Micronesia.
- (e) Where any aircraft, not registered in Federated States of Micronesia and operating under an inspection programme approved or accepted by the State of Registry, does not have the equipment required by Federated States of Micronesia, for operations within Federated States of Micronesia, the owner/operator shall ensure that such equipment is installed and inspected in accordance with

the requirements of the State of Registry, acceptable to the Authority before operation of that aircraft in Federated States of Micronesia.

14 CFR: 91.401

### 8.3.1.2 GENERAL

- (a) The registered owner or operator of an aircraft is responsible for maintaining that aircraft in an airworthy condition, including compliance with all airworthiness directives.
- (b) No person may perform maintenance, preventive maintenance, or alterations on an aircraft other than as prescribed in this subpart and other applicable regulations, including Part 5.
- (c) No person may operate an aircraft for which a manufacturer's maintenance manual or instructions for continued airworthiness has been issued that contains an airworthiness limitations section unless the mandatory replacement times, inspection intervals and related procedures set forth in operations specifications approved by the Authority under Part 9 for AOC holders, or in accordance with an inspection programme approved under 8.3.1.4(c).

14 CFR: 91.403; 91.409

### 8.3.1.3 MAINTENANCE REQUIRED

- (a) Each owner or operator of an aircraft shall—
  - (1) Have that aircraft inspected as prescribed in Part 8.3 and discrepancies repaired as prescribed in the Performance Rules of Part 5;
  - (2) Repair, replace, remove, or inspect any inoperative or items of equipment at the next required inspection, except when permitted under the provisions of a Minimum Equipment List (MEL);
  - (3) Ensure that a placard has been installed on the aircraft when listed discrepancies include inoperative instruments or equipment; and
  - (4) Ensure that maintenance personnel make appropriate entries in the aircraft maintenance records indicating the aircraft has been approved for return to service.

### 8.3.1.4 INSPECTIONS

- (a) Except as provided in paragraph (c), no person may operate an aircraft unless, within the preceding 12 calendar-months, the aircraft has had—
  - (1) An annual inspection in accordance with Part 5 and has been approved for return to service by a person authorized by 5.6.1.7; or
  - (2) An inspection for the issuance of an airworthiness certificate in accordance with Part 5.

*Note: No inspection performed under paragraph (b) of this section may be substituted for any inspection required by this paragraph unless it is performed by a person authorized to perform annual inspection and is entered as an "annual" inspection in the required maintenance record.*

- (b) Except as provided in paragraph (c), no person may operate a non-complex aircraft with a certificated maximum take-off mass less than 5,700 kg carrying any person (other than a crewmember) for compensation or hire, and no person may give flight instruction for compensation

or hire in an aircraft which that person provides, unless within the preceding 100 hours of time in service the aircraft has received an annual or a 100-hour inspection, and been approved for return to service in accordance with Part 5 of these regulations. The 100-hour limitation may be exceeded by not more than 10 hours while en route to reach a place where the inspection can be done. The excess time used to reach a place where the inspection can be done must be included in computing the next 100 hours of time in service.

- (c) Paragraphs (a) and (b) of this section do not apply to—
- (1) An aircraft that carries a special flight permit, a current experimental certificate, or a provisional airworthiness certificate;
  - (2) An aircraft subject to the requirements of paragraph (d) and (e) of this section; or
  - (3) Turbine- powered rotorcraft when the operator elects to inspect that rotorcraft in accordance with paragraph (e) of this section.
- (d) Progressive inspection. Each registered owner or operator of an aircraft desiring to use a progressive inspection program shall submit a written request to the authority, and shall provide—
- (1) A licensed mechanic holding an inspection authorization in accordance with Part 2, an AMO appropriately rated in accordance with Part 6, or the manufacturer of the aircraft to supervise or conduct the progressive inspection;
  - (2) A current inspection procedures manual available and readily understandable to pilot and maintenance personnel containing, in detail—
    - (i) 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;
    - (ii) An inspection schedule, specifying the intervals in hours or days when routine and detailed inspections will be performed and including instructions for exceeding an inspection interval by not more than 10 hours while en-route and for changing an inspection interval because of service experience;
    - (iii) Sample routine and detailed inspection forms and instructions for their use; and
    - (iv) Sample reports and records and instructions for their use.
  - (3) Enough housing and equipment for necessary disassembly and proper inspection of the aircraft; and
  - (4) Appropriate current technical information for the aircraft.

Note: 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 current manufacturer's recommendations, field service experience, and the kind of operation in which the aircraft is engaged. The progressive inspection schedule shall ensure that the aircraft, at all times, will be airworthy and will conform to all applicable aircraft specifications, type certificate data sheets, airworthiness directives, and other approved data acceptable to the authority. If the progressive inspection is discontinued, the owner or operator shall immediately notify the authority, in writing, of the discontinuance. After the discontinuance, the first annual inspection under Part 8 is due within 12

calendar months after the last complete inspection of the aircraft under the progressive inspection. The 100-hour inspection under 8.2.1.7 (a) (2) is due within 100 hours after that complete inspection. A complete inspection of the aircraft, for the purpose of determining when the annual and 100 hour inspections are due, requires a detailed inspection of the aircraft and all its components in accordance with the progressive inspection. A routine inspection of the aircraft and a detailed inspection of several components is not considered to be a complete inspection.

- (e) The registered owner or operator of each large airplane, turbojet multi-engine airplane, turbo propeller-powered multi-engine airplane, and turbine-powered rotorcraft shall select, identify in the aircraft maintenance records, and use one of the following programs for the inspection of the aircraft.
  - (1) A current inspection program recommended by the manufacturer;
  - (2) A continuous maintenance program that is part of a continuous maintenance program for that make any model of aircraft currently approved by the authority for use by an AOC holder;
  - (3) Any other inspection program established by the registered owner or operator of that aircraft and approved by authority.
- (f) Each owner/ operator shall include in the selected program the name and address of the person responsible for the scheduling of the inspections required by the program and provide a copy of the program to the person performing inspection on the aircraft.
- (g) No aircraft shall be approved for return to service unless the replacement times for life-limited parts specified in the aircraft specification-type data sheets are complied with and the airplane, including airframe, engines, propellers, rotors, appliances, and survival and emergency equipment, is inspected in accordance with an inspection program selected.
- (h) Each person wishing to establish or change an approved inspection program shall submit the program for approval by the authority and shall include in writing—
  - (1) Instructions and procedures for the conduct of inspection for the particular make and model aircraft, including necessary tests and checks. The instructions shall set forth in detail the parts and areas of the aeronautical products, including survival and emergency equipment required to be inspected; and
  - (2) A schedule for the inspections that shall be performed expressed in terms of time in service, calendar time, number of system operations or any combination of these.
- (i) When an operator changes from one inspection program to another, the operator shall apply the time in service, calendar times, or cycles of operation accumulated under the previous program, in determining time the inspection is due under the new program.

14 CFR: 91.409

### 8.3.1.5 CHANGES TO AIRCRAFT MAINTENANCE INSPECTION PROGRAMMES

- (a) Whenever the Authority finds that revisions to an approved inspection programme are necessary for the continued adequacy of the programme, the owner or operator shall, after notification by the Authority, make any changes in the programme found to be necessary.

- (b) The owner or operator may petition the Authority to reconsider the notice, within 30 days after receiving that notice.
- (c) Except in the case of an emergency requiring immediate action in the interest of safety, the filing of the petition stays the notice pending a decision by the Authority.

*14 CFR: 91.409  
JAR-OPS: 1.905*

### **8.3.1.6 INSPECTIONS: ALL OTHER AIRCRAFT**

- (a) No person may operate any other aircraft unless within the preceding 12 calendar months it has—
  - (1) Had an inspection in accordance with Performance Rules of Part 5 and approved for return to service by an authorized person; and
- (b) No person may operate an aircraft for flight instruction, or for compensation or hire, unless within the preceding 100 hours of time in service the aircraft has been inspected in accordance with the performance rules of part 5 and approved for return to service by an authorized person as identified in Part 5.

### **8.3.1.7 CONTENT, FORM, AND DISPOSITION OF MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, AND MODIFICATION RECORDS**

- (a) The owner/operator of an aircraft shall keep a maintenance record of--
  - (1) The entire aircraft to include—
    - (i) Total time in service (hours, calendar time and cycles, as appropriate) of the aircraft and all life limited parts;
    - (ii) Current inspection status of the aircraft, including the time since required or approved inspections were last performed;
    - (iii) Current empty mass and the location of the center of gravity when empty;
    - (iv) Addition or removal of equipment;
    - (v) Type and extent of maintenance and alteration, including the time in service and date;
    - (vi) When work was performed; and
    - (vii) A chronological list of compliance with airworthiness directives, including methods of compliance.
  - (2) Life limited products—
    - (i) Total time in service
    - (ii) Date of last overhaul
    - (iii) Time in service since the last overhaul; and
    - (iv) Date of the last inspection.

- (3) Instruments and equipment, the serviceability and operating life of which are determined by their time in service—
  - (i) Records of the time in service as are necessary to determine their serviceability or to compute their operating life; and
  - (ii) Date of last inspection.

### 8.3.1.8 MAINTENANCE RECORDS RETENTION

- (a) Except for records maintained by an AOC holder, each registered owner or operator shall retain the following records until the work is repeated or superseded by other work of equivalent scope and detail—
  - (1) Records of the maintenance, preventive maintenance, minor modifications, and records of the 100-hour, annual, and other required or approved inspections, as appropriate, for each aircraft (including the airframe) and each engine, propeller, rotor, and appliance of an aircraft to include—
    - (i) A description (or reference to data acceptable to the Authority) of the work performed,
    - (ii) The date of completion of the work performed; and
    - (iii) The signature and certificate number of the person approving the aircraft for return to service.
  - (2) Records containing the following information—
    - (i) The total time-in-service of the airframe, each engine, each propeller, and each rotor.
    - (ii) The current status of all life-limited aeronautical products;
    - (iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis;
    - (iv) The current inspection status of the aircraft, including the time since the last inspection required by the inspection programme under which the aircraft and its appliances are maintained.
    - (v) The current status of applicable Airworthiness Directives including, for each, the method of compliance, the Airworthiness Directive number, and revision date. If the Airworthiness Directive involves recurring action, the time and date when the next action is required.
    - (vi) Copies of the forms prescribed by this chapter for each major modification to the airframe and currently installed engines, rotors, propellers, and appliances.
- (b) The records specified in paragraph (a) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold or leased.



- (c) A list of defects shall be retained until the defects are repaired and the aircraft is approved for return to service.
- (d) The owner or operator shall make all maintenance records required by this subsection available for inspection by the Authority.

14 CFR: 121.380  
ICAO Annex 6, Part I: 8.8.1

### 8.3.1.9 TRANSFER OF MAINTENANCE RECORDS

Any owner or operator who sells or leases a Federated States of Micronesia -registered aircraft shall transfer to the purchaser/lessor, at the time of sale or lease, the records identified in § 8.3.1.9 of that aircraft, in plain language form or in coded form at the election of the purchaser/lessor if the coded form provides for the preservation and retrieval of information in a manner acceptable to the Authority.

14 CFR: 91.419; 121.380  
JAR-OPS 1: 1.920

## 8.4 FLIGHTCREW REQUIREMENTS

### 8.4.1.1 COMPOSITION OF THE FLIGHTCREW

- (a) The number and composition of the flight crew may not be less than that specified in the flight manual or other documents associated with the airworthiness certificate.
- (b) A SIC is required for IFR commercial air transport operations, unless the authority has issued a deviation.

ICAO Annex 6, Part I: 4.9.1; 4.9.2; 9.1.1; 9.1.2; 9.1.3; 9.1.4  
ICAO Annex 6, Part II: 9.1; 9.2,  
ICAO Annex 6, Part III, Section II: 7.1.1; 7.1.2; Annex 6, Part III, Section III: 7.1; 7.2  
14 CFR: 121.385; 135.99; 135.101; 135.105; 135.111  
JAR-OPS 1: 1.940(a), 1.940(b)

### 8.4.1.2 FLIGHTCREW QUALIFICATIONS

- (a) The PIC shall ensure that the licenses of each flight crewmember have been issued or rendered valid by the State of Registry, contain the proper ratings, and that all that the flight crewmembers have maintained recency of experience.
- (b) No person may operate a civil aircraft in commercial air transport or aerial work unless that person is qualified for the specific operation and in the specific type of aircraft used.

ICAO Annex 1: 1.2.9.1; 1.2.9.3R  
ICAO Annex 6, Part 1: 9.1.1; 3.1.6  
ICAO Annex 6, Part II: 9.1  
ICAO Annex 6, Part III, Section II: 7.1.1; 1.1.3; Annex 6, Part III, Section III: 7.1  
14 CFR: 135.95

### 8.4.1.3 AUTHORIZATION IN LIEU OF A TYPE RATING

- (a) The Authority may authorize a pilot to operate an aircraft requiring a type rating without a type rating for up to 60 days, provided—
  - (1) The Authority has determined that an equivalent level of safety can be achieved through the operating limitations on the authorization;
  - (2) The applicant shows that compliance with this subsection is impracticable for the flight or series of flights;
  - (3) The operations—
    - (i) Involve only a ferry flight, training flight, test flight, or skill test for a pilot license or rating;
    - (ii) Are within Federated States of Micronesia, unless, by previous agreement with the Authority of the other State, the aircraft is flown to an adjacent contracting State for maintenance;
    - (iii) Are not for compensation or hire unless the compensation or hire involves payment for the use of the aircraft for training or taking a skill test; and
    - (iv) Involve only the carriage of crewmembers considered essential for the flight.
  - (4) If the purpose of the authorization provided by this paragraph cannot be accomplished within the time limit of the authorization, the Authority may authorize an additional period of up to 60 days.

14 CFR: 61.31(b)

### 8.4.1.4 LICENSES REQUIRED

- (a) Except as provided for in 8.4.1.3, no person may act as PIC or in any other capacity as a required flight crewmember of a civil aircraft of:
  - (1) Federated States of Micronesia registry, unless he or she carries in his or her personal possession the appropriate and current license for that flightcrew position for that type of aircraft and a valid medical certificate.
  - (2) Foreign registry unless he or she carries in his or her personal possession a valid and current license for that type of aircraft issued or validated by the State in which the aircraft is registered.

ICAO Convention, Article 29  
ICAO Annex 1: 1.2.1, 2.1.1.1  
14 CFR: 61.3(a)  
JAR-OPS 1: 1.125(b)

### 8.4.1.5 AIRMAN— LIMITATIONS ON USE OF SERVICES FOR COMMERCIAL AIR TRANSPORT

No person may serve as a flight crewmember, nor may any AOC holder use a flight crewmember in commercial air transport unless that person is otherwise qualified for the operations for which he or she is to be used.

*Note: The qualifications for flight crewmembers engaged in commercial air transport are provided in Subpart 8.10.*

14 CFR: 121.383, 135.95

#### 8.4.1.6 RATING REQUIRED FOR IFR OPERATIONS

- (a) No person may act as pilot of a civil aircraft under IFR or in weather conditions less than the minimums prescribed for VFR flight unless—
  - (1) The pilot holds an instrument rating or an ATP license with an appropriate aircraft category, class, and type (if required) rating for the aircraft being flown;
  - (2) In the case of helicopter, the pilot holds a helicopter instrument rating

ICAO Annex 1: 2.6.2.1; 2.6.2.2; 2.10.2  
14 CFR: 61.3(e)

#### 8.4.1.7 SPECIAL AUTHORIZATION REQUIRED FOR CATEGORY II/III OPERATIONS

- (a) Except as shown in paragraph (b), no person may act as a pilot crew member of a civil aircraft in a Category II/III operation unless—
  - (1) In the case of a PIC, he or she holds a current Category II or III pilot authorization issued by the State of Registry for that aircraft type.
  - (2) In the case of a CP, he or she is authorized by the State of Registry to act as CP in that aircraft type in Category II/III operations.
- (b) An authorization is not required for individual pilots of an AOC holder that has operations specifications approving Category II or III operations.

14 CFR: 61.67, 61.68

#### 8.4.1.8 PILOT LOGBOOKS

- (a) Each pilot shall show the aeronautical training and experience used to meet the requirements for a license or rating, or recency of experience, by a reliable record.
- (b) Each PIC shall carry his or her logbook on all general aviation international flights.
- (c) A student pilot shall carry his or her logbook, including the proper flight instructor endorsements, on all solo cross-country flights. [RESERVED]

*Note: The acceptable methods of logging experience are outlined in Part 2 - Personnel Licensing.*

14 CFR: 61.51

#### 8.4.1.9 PIC CURRENCY— TAKEOFF AND LANDINGS

- (a) No person may act as PIC or co-pilot of an aircraft unless, within the preceding 90 days that pilot has:
  - (1) Made 3 takeoffs and landings as the sole manipulator of the flight controls in an aircraft of the same category and class and if a type rating is required, of the same type or in a flight simulation training device approved for the purpose.

- (2) *For a tailwheel airplane*, made the 3 takeoffs and landings in a tailwheel airplane with each landing to a full stop.
- (3) *For night operations*, made the 3 takeoffs and landings required by paragraph (a)(1) at night.
- (b) A pilot who has not met the recency of experience for takeoffs and landings shall satisfactorily complete a requalification curriculum acceptable to the Authority.
- (c) Requirements of paragraphs (a) and (b) may be satisfied in a flight simulator approved by the Authority.

*ICAO Annex 1: 1.2.5.1  
ICAO Annex 6, Part I: 9.4.1; 9.4.2  
ICAO Annex 6, Part III, Section II: 7.4.1; 7.4.2  
14 CFR: 61.57(a)&(b), 121.439, 125.285, 135.247  
JAR-OPS 1: 1.970*

#### 8.4.1.10 PILOT CURRENCY: IFR OPERATIONS

- (a) No person may act as a pilot under IFR, nor in IMC, unless he or she has, within the past 6 calendar-months—
  - (1) Logged at least 6 hours of instrument flight time including at least 3 hours in flight in the category of aircraft; and
  - (2) Completed at least 6 instrument approaches.
- (b) A pilot who has completed an instrument competency check with an authorized representative of the Authority retains currency for IFR operations for 6 calendar-months following that check.

*ICAO Annex 1: 1.2.5.1  
ICAO Annex 6, Part I: 9.4.4  
ICAO Annex 6, Part III, Section II: 7.4.4  
14 CFR: 61.57(c)*

#### 8.4.1.11 PILOT CURRENCY— GENERAL AVIATION OPERATIONS

- (1) No person may act as PIC of an aircraft type certified for more than one pilot or a turbojet aircraft unless, since the beginning of the past 12 calendar-months, he or she has passed a proficiency check in an aircraft with an authorized representative of the Authority.
- (2) No person may act as PIC of an aircraft type certified for more than one pilot or a turbojet aircraft unless, since the beginning of the past 24 calendar-months, he or she has passed a proficiency check in the type of aircraft to be operated.
- (3) No person may act as PIC of an aircraft type certified for a single pilot unless, since the beginning of the 24 calendar-months, he or she has passed a proficiency check with an authorized representative of the Authority.
- (4) The person conducting the proficiency checks shall ensure that each check duplicates the maneuvers of the type rating skill test.
- (5) No person may act as SIC of an aircraft type certified for more than one pilot unless, since the beginning of the past 12 calendar-months, he or she has—

- (a) Become familiar with the aircraft systems, performance, normal and emergency procedures; and
- (b) Logged 3 takeoff and landings as the sole manipulator of the controls.

*Note: Subsection 8.4.1.11 does not apply to pilots engaged in commercial air transport operations. Those requirements are outlined in § 8.10.1.21.*

*ICAO Annex 1: 1.2.5.1  
14 CFR: 91.5, 61.57, 61.58*

### 8.4.1.12 PILOT PRIVILEGES AND LIMITATIONS

A pilot may conduct operations only within the general privileges and limitations of each license as specified in Part 2.

## 8.5 CREWMEMBER DUTIES AND RESPONSIBILITIES

### 8.5.1.1 AUTHORITY AND RESPONSIBILITY OF THE PIC

- (a) The PIC shall be responsible for the operations and safety of the aircraft and for the safety of all persons on board, during flight.
- (b) The PIC of an aircraft shall have final authority as to the operation of the aircraft while he or she is in command.
- (c) The PIC of an aircraft shall, whether manipulating the controls or not, be responsible for the operation of the aircraft in accordance with the rules of the air, except that the PIC may depart from these rules in emergency circumstances that render such departure absolutely necessary in the interests of safety.

*ICAO Annex 2: 2.3.1, 2.4  
ICAO Annex 6, Part I: 3.1.3; 4.5.1  
ICAO Annex 6, Part II: 3.2  
ICAO Annex 6, Part III, Section II:2.5.1; Annex 6, Part III, Section III:1.1.2  
14 CFR: 91.3  
JAR-OPS 1: 1.090*

### 8.5.1.2 COMPLIANCE WITH LOCAL REGULATIONS

- (a) The PIC shall comply with the relevant laws, regulations and procedures of the States in which the aircraft is operated.
- (b) If an emergency situation which endangers the safety of the aircraft or persons necessitates the taking of action which involves a violation of local regulations or procedures, the PIC shall—
  - (1) Notify the appropriate local authority without delay;
  - (2) Submit a report of the circumstances, if required by the State in which the incident occurs; and
  - (3) Submit a copy of this report to the State of Registry.
- (c) Each PIC shall submit reports specified in paragraph (b) to the Authority within 10 days in the form prescribed.

*ICAO Annex 6, Part I: 3.1.1, 3.1.2; 3.1.4  
ICAO Annex 6, Part II: 3.1; 3.3; 3.4*

ICAO Annex 6, Part III, Section II: 1.1.1; 1.1.2; 1.1.5, Annex 6, Part III, Section III: 1.1.1; 1.1.3; 1.1.4  
14 CFR: 91.703

### 8.5.1.3 NEGLIGENT OR RECKLESS OPERATIONS OF THE AIRCRAFT

No person may operate an aircraft in a negligent or reckless manner so as to endanger life or property of others.

ICAO Annex 2: 3.1.1  
14 CFR: 91.13  
JAR-OPS 1: 1.120

### 8.5.1.4 FITNESS OF FLIGHT CREWMEMBERS [RESERVED]

### 8.5.1.5 PROHIBITION ON USE OF PSYCHOACTIVE SUBSTANCES, INCLUDING NARCOTICS, DRUGS OR ALCOHOL

- (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; or
  - (3) While using any psychoactive substance that affects the person's faculties in any way contrary to safety.
- (b) A crewmember shall, up to 8 hours before or immediately after acting or attempting to act as a crewmember, on the request of a law enforcement officer or the Authority, submit to a test to indicate the presence of alcohol or other psychoactive substances in the blood.

ICAO Annex 1: 1.2.6.1; 1.2.7.1  
ICAO Annex 2: 2.5  
ICAO Annex 6, Part I: 3.5  
ICAO Annex 6, Part II: 3.7; 4.14  
ICAO Annex 6, Part III, Section II: 1.3; Annex 6, Part III, Section III: 1.3; 2.14.  
14 CFR: 91.17

### 8.5.1.6 CREWMEMBER USE OF SEAT BELTS AND SHOULDER HARNESSSES

- (a) Each crewmember shall have his or her seat belts fastened during takeoff and landing and all other times when seated at his or her station.
- (b) Each crewmember occupying a station equipped with a shoulder harness shall fasten that harness during takeoff and landing, except that the shoulder harness may be unfastened if the crewmember cannot perform the required duties with the shoulder harness fastened.
- (c) Each occupant of a seat equipped with a combined safety belt and shoulder harness shall have the combined safety belt and shoulder harness properly secured about that occupant during takeoff and landing and be able to properly perform assigned duties.
- (d) At each unoccupied seat, the safety belt and shoulder harness, if installed, shall be secured so as not to interfere with crewmembers in the performance of their duties or with the rapid egress of occupants in an emergency.

ICAO Annex 6, Part I: 4.4.4.1; 4.4.4.2; 4.4.4.3; 4.4.4.4; 4.4.4.5; 4.4.6R  
ICAO Annex 6, Part II: 4.15.1; 4.15.2; 4.15.3; 4.15.4R,  
ICAO Annex 6, Part III, Section II: 2.4.4.1; 2.4.4.2; 2.4.4.3; 2.4.4.4; Annex 6, Part III, Section III: 2.15.1; 2.15.2; 2.15.3; 2.15.4R

14 CFR: 91.107, 121.311(f)-(j), 125.211(f), 135.171  
JAR-OPS: 1.320(a)

### 8.5.1.7 FLIGHT CREWMEMBERS AT DUTY STATIONS [RESERVED]

### 8.5.1.8 REQUIRED CREWMEMBER EQUIPMENT

- (a) Each crewmember involved in night operations shall have a flashlight at his or her station.
- (b) Each pilot crew member shall have at his or her station an aircraft checklist containing at least the pre-takeoff, after takeoff, before landing and emergency procedures.
- (c) Each pilot crew member shall have at his or her station current and suitable charts to cover the route of the proposed flight and any route along which it is reasonable to expect that the flight may be diverted.
- (d) Each flight crewmember assessed as fit to exercise the privileges of a license subject to the use of suitable correcting lenses, shall have a spare set of the correcting lenses readily available when performing as a required crewmember in commercial air transport.

ICAO Annex 6, Part I: 6.2.3(c), 6.10(f), 9.5  
ICAO Annex 6, Part II: 6.7(f); 6.1.3.1.1(d)(2)  
ICAO Annex 6, Part III, Section II: 4.11(f), 7.5; Annex 6, Part III, Section III: 4.1.3.1(d)(2)

### 8.5.1.9 COMPLIANCE WITH CHECKLISTS

The PIC shall ensure that the flightcrew follows the approved checklist procedures when operating the aircraft.

ICAO Annex 6, Part I: 4.5.2  
ICAO Annex 6, Part III, Section II: 2.2.5

### 8.5.1.10 SEARCH AND RESCUE INFORMATION

For all international flights, the PIC shall have on board the aircraft essential information concerning the search and rescue services in the areas over which he or she intends to operate the aircraft.

ICAO Annex 6, Part I: 3.1.5  
ICAO Annex 6, Part II: 3.5R,  
ICAO Annex 6, Part III, Section II: 1.1.6, Annex 6, Part III, Section III: 1.1.5R  
JAR-OPS: 1.050

### 8.5.1.11 PRODUCTION OF AIRCRAFT AND FLIGHT DOCUMENTATION

The PIC shall, within a reasonable time of being requested to do so by a person authorized by the Authority, produce to that person the documentation required to be carried on the aircraft.

JAR-OPS: 1.150

### 8.5.1.12 LOCKING OF FLIGHT DECK COMPARTMENT DOOR: COMMERCIAL AIR TRANSPORT

The PIC shall ensure that the flight deck compartment door (if installed) is locked at all times during passenger-carrying commercial air transport operations, except as necessary to accomplish approved operations or to provide for emergency evacuation.

**8.5.1.13 ADMISSION TO THE FLIGHT DECK— COMMERCIAL AIR TRANSPORT**

- (a) No person may admit any person to the flight deck of an aircraft engaged in commercial air transport operations unless the person being admitted is—
  - (1) An operating crewmember;
  - (2) A representative of the Authority responsible for certification, licensing or inspection, if this is required for the performance of his or her official duties; or
  - (3) Permitted by and carried out in accordance with instructions contained in the Operations Manual.
- (b) The PIC shall ensure that—
  - (1) In the interest of safety, admission on the flight deck does not cause distraction and/or interference with the flight's operations; and
  - (2) All persons carried on the flight deck are made familiar with the relevant safety procedures.

14 CFR: 121.547, 125.315  
JAR-OPS: 1.100

**8.5.1.14 ADMISSION OF INSPECTOR TO THE FLIGHT DECK**

Whenever, in performing the duties of conducting an inspection, an inspector from the Authority presents [Aviation Safety Inspector's Credential Form] to the PIC, the PIC shall give the inspector free and uninterrupted access to the flight deck of the aircraft.

14 CFR: 121.548, 125.317  
JAR-OPS: 1.145

**8.5.1.15 DUTIES DURING CRITICAL PHASES OF FLIGHT: COMMERCIAL AIR TRANSPORT**

- (a) No flight crewmember may perform any duties during a critical phase of flight except those required for the safe operation of the aircraft.
- (b) No PIC may permit a flight crewmember to engage in any activity during a critical phase of flight which could distract or interfere with the performance of his or her assigned duties.

14 CFR: 121.542

**8.5.1.16 MANIPULATION OF THE CONTROLS— COMMERCIAL AIR TRANSPORT**

- (a) No PIC may allow an unqualified person to manipulate the controls of an aircraft during commercial air transport operations.
- (b) No person may manipulate the controls of an aircraft during commercial air transport operations unless he or she is qualified to perform the applicable crewmember functions and is authorized by the AOC holder.

14 CFR: 121.545, 125.313, 135.115



**8.5.1.17 SIMULATED ABNORMAL SITUATIONS IN FLIGHT: COMMERCIAL AIR TRANSPORT**

No person may cause or engage in simulated abnormal or emergency situations or the simulation of IMC by artificial means during commercial air transport operations.

*ICAO Annex 6, Part I: 4.2.4  
ICAO Annex 6, Part III, Section II: 2.2.4  
JAR-OPS: 1.370*

**8.5.1.18 COMPLETION OF THE TECHNICAL LOG— COMMERCIAL AIR TRANSPORT**

The PIC shall ensure that all portions of the technical log are completed at the appropriate points before, during and after flight operations.

*ICAO Annex 6, Part I: 4.5.4; 4.5.5; 11.4.1  
ICAO Annex 6, Part III, Section II: 2.5.5; 9.4.1*

**8.5.1.19 REPORTING MECHANICAL IRREGULARITIES**

- (a) The PIC shall ensure that all mechanical irregularities occurring during flight time are—
- (1) For general aviation operations, entered in the aircraft logbook and disposed of in accordance with the MEL or other approved or prescribed procedure.
  - (2) For commercial air transport operations and aerial work operations, entered in the aircraft maintenance records section of the technical log for the aircraft at the appropriate points before, during and at the end of that flight time.

*ICAO Annex 6, Part I: 4.5.4  
ICAO Annex 6, Part III, Section II: 2.5.4  
14 CFR: 121.651, 125.323, 135.65(b)*

**8.5.1.20 REPORTING OF FACILITY AND NAVIGATION AID INADEQUACIES**

Each crewmember shall report, without delay, any inadequacy or irregularity of a facility or navigational aid observed in the course of operations to the person responsible for that facility or navigational aid.

*ICAO Annex 6, Part I: 4.1.2  
ICAO Annex 6, Part II: 4.1  
ICAO Annex 6, Part III, Section II: 2.1.2; Annex 6, Part III, Section III: 2.1  
14 CFR: 91.185; 91.187*

**8.5.1.21 REPORTING OF HAZARDOUS CONDITIONS**

The PIC shall report to the appropriate ATC facility, without delay and with enough detail to be pertinent to the safety of other aircraft, any hazardous flight conditions encountered en route, including those associated with meteorological conditions.

*14 CFR: 91.183(b)(c), 125.321  
ICAO Annex 6, Part I: 4.4.3  
ICAO Annex 6, Part II: 4.12R; 4.13R  
ICAO Annex 6, Part III, Section II: 2.4.3; Annex 6, Part III, Section III: 2.12R 2.13R*

**8.5.1.22 REPORTING OF INCIDENTS**

- (a) Air traffic report. The PIC shall submit, without delay, an air traffic incident report whenever an aircraft in flight has been endangered by—
- (1) A near collision with another aircraft or object;

- (2) Faulty air traffic procedures or lack of compliance with applicable procedures by ATC or by the flightcrew; or
- (3) A failure of ATC facilities.
- (b) Birds. In the event a bird constitutes an in-flight hazard or an actual bird strike occurs, the PIC shall, without delay—
  - (1) Inform the appropriate ground station whenever a potential bird hazard is observed; and
  - (2) Submit a written bird strike report after landing.
- (c) Dangerous Goods. The PIC shall inform the appropriate ATC facility, if the situation permits, when an in-flight emergency occurs involving dangerous goods on board.
- (d) Unlawful Interference. The PIC shall submit a report to the local authorities and to the Authority, without delay, following an act of unlawful interference with the crewmembers on board an aircraft.

*ICAO Annex 6, Part I: 3.4; 13.5*  
*ICAO Annex 6, Part II: 3.6*  
*ICAO Annex 6, Part III, Section II: 1.2, 11.3; Annex 6, Part III, Section III: 1.2.*  
*ICAO Annex 18: 12.1*  
*14 CFR: 91.183*  
*JAR-OPS: 1.420, 1.1245*

#### **8.5.1.23 ACCIDENT NOTIFICATION**

- (a) The PIC shall notify the nearest appropriate authority, by the quickest available means, of any accident involving his or her aircraft that results in serious injury or death of any person, or substantial damage to the aircraft or property.
- (b) The PIC shall submit a report to the Authority of any accident which occurred while he or she was responsible for the flight.

*ICAO Annex 6, Part I: 4.5.3*  
*ICAO Annex 6, Part II: 3.4*  
*ICAO Annex 6, Part III, Section II: 2.5.3; Annex 6, Part III, Section III: 1.1.4*  
*49 CFR: 830.3*  
*JAR-OPS: 1.425*

#### **8.5.1.24 OPERATION OF COCKPIT VOICE AND FLIGHT DATA RECORDERS**

- (a) The PIC shall ensure that whenever an aircraft has flight recorders installed, those recorders are operationally checked and operated continuously from the instant—
  - (1) For a flight data recorder, the aircraft begins its takeoff roll until it has completed the landing roll, and
  - (2) For a cockpit voice recorder, the initiation of the pre-start checklist until the end of the securing aircraft checklist.
- (b) The PIC may not permit a flight data recorder or cockpit voice recorder to be disabled, switched off or erased during flight, unless necessary to preserve the data for an accident or incident investigation.
- (c) In event of an accident or incident, the PIC shall act to preserve the recorded data for subsequent investigation upon completion of flight.

ICAO Annex 6, Part I: 6.3.11.1; 6.3.11.2  
 ICAO Annex 6, Part II: 6.10.8.1, 6.10.8.2; 6.10.9; 6.10.10  
 ICAO Annex 6, Part III Section II: 4.3.9.1; 4.3.9.2; Annex 6, Part III, Section III: 4.9.8.1; 4.9.8.2.  
 14 CFR: 91.609; 121.344(g)  
 JAR-OPS: 1.160

### 8.5.1.25 CREWMEMBER OXYGEN— MINIMUM SUPPLY AND USE

- (a) The PIC shall ensure that breathing oxygen and masks are available to crew members in sufficient quantities for all flights at such altitudes where a lack of oxygen might result in impairment of the faculties of crewmembers.
- (b) In no case shall the minimum supply of oxygen on board the aircraft be less than that prescribed by the Authority.

*Note: The requirements for oxygen supply and use are prescribed in Part 7, 7.1.8.12, Required Instruments and Equipment.*

- (c) The PIC shall ensure that all flight crewmembers, when engaged in performing duties essential to the safe operation of an aircraft in flight, use breathing oxygen continuously at cabin altitudes exceeding 10,000 ft for a period in excess of 30 minutes and whenever the cabin altitude exceeds 13,000 ft.
- (d) One pilot at the controls of a pressurized aircraft in flight shall wear and use an oxygen mask—
  - (1) For general aviation operations, at flight levels above 350, if there is no other pilot at a pilot duty station; and
  - (2) For commercial air transport operations, at flight levels above 250, if there is no other pilot at a pilot duty station.

ICAO Annex 6, Part I: 4.3.8.1; 4.3.8.2; 4.4.5.1; 4.4.5.2  
 ICAO Annex 6, Part II: 4.9, 4.10  
 ICAO Annex 6, Part III, Section II: 2.8.3.1; 2.8.3.2; 2.4.5; Annex 6, Part III, Section III: 2.9.1; 2.9.2; 2.10  
 14 CFR: 91.211, 121.333(c), 135.89  
 JAR-OPS: 1.385

### 8.5.1.26 PORTABLE ELECTRONIC DEVICES

- (a) No PIC or SCA may permit any person to use, nor may any person use a portable electronic device on board an aircraft that may adversely affect the performance of aircraft systems and equipment unless—
  - (1) For IFR operations other than commercial air transport, the PIC allows such a device before its use; or
  - (2) For commercial air transport operations, the AOC holder makes a determination of acceptable devices and publishes that information in the Operations Manual for the crewmembers use; and
  - (3) The PIC informs passengers of the permitted use.

14 CFR: 91.21  
 JAR-OPS: 1.110

## 8.6 FLIGHT PLANNING AND SUPERVISION

## 8.6.1 FLIGHT PLANS

### 8.6.1.1 SUBMISSION OF A FLIGHT PLAN

- (a) Prior to operating one of the following, a pilot shall file a VFR or IFR flight plan, as applicable, for—
  - (1) Any flight (or portion thereof) to be provided with ATC service;
  - (2) Any IFR flight within advisory airspace;
  - (3) Any flight within or into designated areas, or along designated routes, when so required by the appropriate ATC authority to facilitate the provision of flight information, alerting and search and rescue services;
  - (4) Any flight within or into designated areas, or along designated routes, when so required by the appropriate ATC authority to facilitate co-ordination with appropriate military units or with ATC facilities in adjacent states in order to avoid the possible need for interception for the purpose of identification; and
  - (5) Any flight across international borders.
- (b) The PIC shall submit a flight plan before departure or during flight, to the appropriate ATC facility, unless arrangements have been made for submission of repetitive flight plans.
- (c) Unless otherwise prescribed by the appropriate ATC authority, a pilot should submit a flight plan to the appropriate ATC facility—
  - (1) At least sixty minutes before departure; or
  - (2) If submitted during flight, at a time which will ensure its receipt by the appropriate ATC facility at least ten minutes before the aircraft is estimated to reach—
    - (i) The intended point of entry into a control area or advisory area; or
    - (ii) The point of crossing an airway or advisory route.

*ICAO Annex 2: 3.3.1.1; 3.3.1.2; 3.3.1.3; 3.3.1.4  
14 CFR: 91.173*

### 8.6.1.2 AIR TRAFFIC CONTROL FLIGHT PLAN— COMMERCIAL AIR TRANSPORT

No person may takeoff an aircraft in commercial air transport if an ATC flight plan has not been filed, except as authorized by the Authority.

### 8.6.1.3 CONTENTS OF A FLIGHT PLAN

- (a) Each person filing an IFR or VFR flight plan shall include in it the following information—
  - (1) Aircraft identification;
  - (2) Flight rules and type of flight;
  - (3) Number and type(s) of aircraft and wake turbulence category;

- (4) Equipment;
- (5) Departure aerodrome and alternate (if required);
- (6) Estimated off-block time;
- (7) Cruising speed(s);
- (8) Cruising level(s);
- (9) Route to be followed;
- (10) Destination aerodrome and alternate (if required);
- (11) Fuel endurance;
- (12) Total number of persons on board;
- (13) Emergency and survival equipment; and
- (14) Other information.

*Note: Whatever the purpose for which it is submitted, a flight plan shall contain information, as applicable, on relevant items up to and including "alternate aerodromes(s)" regarding the whole route or the portion thereof for which the flight plan is submitted.*

*ICAO Annex 2: 3.3.2  
14 CFR: 91.153(a), 91.169(a)*

#### **8.6.1.4 PLANNED RECLEARANCE**

If during flight planning a person determines that there is a possibility, depending on fuel endurance, that a flight may be able to change destinations and still comply with minimum fuel supply planning requirements, that person shall notify the appropriate ATC facility of this possibility when the flight plan is submitted.

*Note: The intent of this provision is to facilitate a new clearance to a revised destination, normally beyond the filed destination aerodrome.*

*ICAO Annex 2: 3.6.1.3*

#### **8.6.1.5 CHANGES TO A FLIGHT PLAN**

- (a) When a change occurs to a flight plan submitted for an IFR flight or a VFR flight operated as a controlled flight, the pilot shall report that change as soon as practicable to the appropriate ATC facility.
- (b) For VFR flights other than those operated as controlled flight, the PIC shall report significant changes to a flight plan as soon as practicable to the appropriate ATC facility.

*Note: Information submitted before departure regarding fuel endurance or total number of persons carried on board, if incorrect at time of departure, constitutes a significant change and shall be reported.*

*ICAO Annex 2: 3.3.4*

### 8.6.1.6 CLOSING A FLIGHT PLAN

- (a) The PIC shall make a report of arrival either in person or by radio to the appropriate ATC facility at the earliest possible moment after landing at the destination aerodrome, unless ATC automatically closes a flight plan.
- (b) When a flight plan has been submitted for a portion of a flight, but not the arrival at destination, the pilot shall close that flight plan en route with the appropriate ATC facility.
- (c) When no ATC facility exists at the arrival aerodrome, the pilot shall contact the nearest ATC facility to close the flight plan as soon as practicable after landing and by the quickest means available.
- (d) Pilots shall include the following elements of information in their arrival reports—
  - (1) Aircraft identification;
  - (2) Departure aerodrome;
  - (3) Destination aerodrome (only in the case of a diversionary landing);
  - (4) Arrival aerodrome; and
  - (5) Time of arrival.

*ICAO Annex 2: 3.3.5.1; 3.3.5.2; 3.3.5.3; 3.3.5.4; 3.3.5.5  
14 CFR: 91.153(b), 91.169(d)*

## 8.6.2 FLIGHT PLANNING AND PREPARATION

### 8.6.2.1 AIRCRAFT AIRWORTHINESS AND SAFETY PRECAUTIONS

- (a) The PIC may not operate a civil aircraft in flight until satisfied that—
  - (1) The aircraft is airworthy, duly registered and that appropriate certificates are aboard the aircraft;
  - (2) The instruments and equipment installed in the aircraft are appropriate, taking into account the expected flight conditions; and
  - (3) Any necessary maintenance has been performed and a maintenance release, if applicable, has been issued in respect to the aircraft.
- (b) For commercial air transport operations, the PIC shall certify by signing the aircraft technical log that he or she is satisfied that the requirements of paragraph (a) have been met for a particular flight.

*ICAO Annex 6, Part I: 4.3.1(a)-(c)  
ICAO Annex 6, Part II: 4.4.1(a)-(c)  
ICAO Annex 6, Part III, Section II: 2.3.1(a)-(c); Annex 6, Part III, Section III: 2.4(a)-(c)  
14 CFR: 91.7*

### 8.6.2.2 ADEQUACY OF OPERATING FACILITIES

No person may commence a flight unless it has been determined by every reasonable means available that the ground and/or water areas and facilities available and directly required for such flight and for the safe operation of the aircraft, are adequate, including communication facilities and navigation aids.

*Note: "Reasonable means" denotes use, at the point of departure, of information available to the PIC either through official information published by the aeronautical information services or readily obtainable in other sources.*

*ICAO Annex 6, Part I: 4.1.1; 4.1.2; 4.1.3*

*ICAO Annex 6, Part II: 4.1*

*ICAO Annex 6, Part III, Section II: 2.1.1; 2.1.2; 2.1.3; Annex 6, Part III, Section III: 2.1*

*14 CFR: 121.105; 121.97*

### 8.6.2.3 WEATHER REPORTS AND FORECASTS

- (a) Before commencing a flight, the PIC shall be familiar with all available meteorological information appropriate to the intended flight.
- (b) The PIC shall include, during preparation for a flight away from the vicinity of the place of departure, and for every flight under the instrument flight rules—
  - (1) A study of available current weather reports and forecasts; and
  - (2) The planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of weather conditions.

*ICAO Annex 6, Part I: 4.3.5.1*

*ICAO Annex 6, Part II: 4.5*

*ICAO Annex 6, Part III, Section II: 2.3.5.1; Annex 6, Part III, Section III: 2.5*

*14 CFR: 91.103(a)*

### 8.6.2.4 WEATHER LIMITATIONS FOR VFR FLIGHTS

No person will commence a flight to be conducted in accordance with VFR unless available current meteorological reports, or a combination of current reports and forecasts, indicate that the meteorological conditions along the route, or that part of the route to be flown under VFR, will, at the appropriate time, allow VFR operations.

*ICAO Annex 6, Part I: 4.3.5.1*

*ICAO Annex 6, Part II: 4.6.1*

*ICAO Annex 6, Part III, Section II: 2.3.5.1; Annex 6, Part III, Section III: 2.6.1*

*14 CFR: 91.103(a)*

### 8.6.2.5 IFR DESTINATION AERODROMES

- (a) For IFR flight planning purposes, no person may commence an IFR flight unless the available information indicates that the weather conditions at the aerodrome of intended landing and, if required, at least one suitable alternate at the ETA, will be at or above the—
  - (1) Minimum ceiling and visibility values for the standard instrument approach procedure to be used; or
  - (2) Minimum operating altitude, if no instrument approach procedure is to be used, which would allow a VMC descent to the aerodrome.

*Note: A partial exception is granted for commercial air transport IFR flight planning, to the effect that the weather at the destination does not have to be at or above the approach minima to release and commence a flight, as long as the designated alternate aerodrome meets the IFR weather selection criteria.*

ICAO Annex 6, Part I: 4.3.5.2  
ICAO Annex 6, Part II: 4.5; 4.6.3.1  
ICAO Annex 6, Part III, Section II: 2.3.5.2; Annex 6, Part III, Section III: 2.5; 2.6.3.1  
14 CFR: 121.613; 135.219

### 8.6.2.6 IFR DESTINATION ALTERNATE REQUIREMENT

- (a) No person may commence an IFR flight in an airplane without at least one destination alternate aerodrome listed in the flight plan unless—
  - (1) There is a standard instrument approach procedure prescribed for the aerodrome of intended landing by the jurisdictional authorities; and
  - (2) Available current meteorological information indicates that the following meteorological conditions will exist from two hours before to two hours after the ETA—
    - (i) A cloud base of at least 300 m (1,000 ft) above the minimum associated with the instrument approach procedure; and
    - (ii) Visibility of at least 6 km or of 4 km more than the minimum associated with the procedure.
- (b) The ceiling and visibility requirements of paragraph (a) may be reduced upon approval of the Authority for—
  - (1) Helicopters, powered-lift, and airships;
  - (2) Commercial air transport where no suitable destination alternate exists.

ICAO Annex 6, Part I: 4.3.4.3  
ICAO Annex 6, Part II: 4.6.2.1; 4.6.2.2  
ICAO Annex 6, Part III, Section II: 2.3.4.1; Annex 6, Part III, Section III: 2.6.2.1; 2.6.2.2  
14 CFR: 91.169(b), 135.223(b)  
JAR-OPS: 1.295(c)

### 8.6.2.7 IFR ALTERNATE AERODROME SELECTION CRITERIA

- (a) If alternate minimums are published, no PIC may designate an alternate aerodrome in an IFR flight plan unless the current available forecast indicates that the meteorological conditions at that alternate at the ETA will be at or above those published alternate minimums.
- (b) If alternate minimums are not published, and if there is no prohibition against using the aerodrome as an IFR planning alternate, each PIC shall ensure that the meteorological conditions at that alternate at the ETA will be at or above—
  - (1) For a precision approach procedure, a ceiling of at least 600 ft and visibility of not less than 2 statute miles; or



- (2) For a non-precision approach procedure, a ceiling of at least 800 ft and visibility of not less than 2 statute miles.

ICAO Annex 6, Part I: 4.3.4.1.3; 4.3.5.2

ICAO Annex 6, Part II: 4.2; 4.5; 4.6.3.1

ICAO Annex 6, Part III, Section II: 2.3.5.2; Annex 6, Part III, Section III: 2.2; 2.5; 2.6.3.1

14 CFR: 91.169(c)

JAR-OPS: 1.297

### 8.6.2.8 OFFSHORE ALTERNATES FOR HELICOPTER OPERATIONS [RESERVED]

### 8.6.2.9 TAKEOFF ALTERNATE AERODROMES— COMMERCIAL AIR TRANSPORT OPERATIONS

- (a) No person may release or takeoff an airplane without a suitable takeoff alternate specified in the flight plan if it would not be possible to return to the aerodrome of departure.
- (b) Each operator shall ensure that each takeoff alternate specified shall be located within—
- (1) For two-engine airplane, one hour flight time at single-engine cruise speed unless the aircraft and crews are authorized for ETOPS, or
  - (2) For three or four-engine airplane, two hours flight time at single-engine cruise speed.

*Note: All calculations are based on the one-engine-inoperative cruising speed according to the AFM in still air conditions based on the actual takeoff mass.*

ICAO Annex 6, Part I: 4.3.4.1.1; 4.3.4.1.2

14 CFR: 121.617(a)

JAR-OPS: 1.295(b)

### 8.6.2.10 MAXIMUM DISTANCE FROM AN ADEQUATE AERODROME FOR TWIN-ENGINE AIRPLANES WITHOUT AN ETOPS APPROVAL

- (a) Unless specifically approved by the Authority (ETOPS Approval), an AOC holder shall not operate a two-engine airplane over a route which contains a point further from an adequate aerodrome than, in the case of—
- (1) Large, turbine-powered airplanes the distance flown in 60 minutes at the one-engine-inoperative cruise speed determined in accordance with paragraph (b) with either:
    - (i) A maximum approved passenger seating configuration of 20 or more; or
    - (ii) A maximum take-off mass of 45,360 kg or more,
  - (2) Reciprocating engine powered airplanes:
    - (i) The distance flown in 120 minutes at the one-engine-inoperative cruise speed determined in accordance with paragraph (b); or
    - (ii) 300 nautical miles, whichever is less.
- (b) An AOC holder shall determine a speed for the calculation of the maximum distance to an adequate aerodrome for each two-engine airplane type or variant operated, not exceeding  $V_{mo}$  based upon the true airspeed that the airplane can maintain with one-engine-inoperative under the following conditions:

- (1) International Standard Atmosphere;
- (2) Level flight:
  - (i) For turbine-powered airplanes at:
    - (A) FL 170; or
    - (B) At the maximum flight level to which the airplane, with one engine inoperative, can climb, and maintain, using the gross rate of climb specified in the AFM, whichever is less.
  - (ii) For propeller driven airplanes
    - (A) FL 80; or
    - (B) At the maximum flight level to which the airplane, with one engine inoperative, can climb, and maintain, using the gross rate of climb specified in the AFM, whichever is less.
- (3) Maximum continuous thrust or power on the remaining operating engine;
- (4) An aeroplane mass not less than that resulting from:
  - (i) Take-off at sea-level at maximum take-off mass until the time elapsed since take-off is equal to the applicable threshold prescribed in paragraph (a);
  - (ii) All engines climb to the optimum long range cruise altitude until the time elapsed since take-off is equal to the applicable threshold prescribed in subparagraph (a); and
  - (iii) All engines cruise at the long range cruise speed at this altitude until the time elapsed since take-off is equal to the applicable threshold prescribed in paragraph (a).
- (c) An AOC holder shall ensure that the following data, specific to each type or variant, is included in the Operations Manual:
  - (1) The one-engine-inoperative cruise speed determined in accordance with paragraph (b); and
  - (2) The maximum distance from an adequate aerodrome determined in accordance with paragraphs (a) and (b).

*Note: The speeds and altitudes (flight levels) specified above are only intended to be used for establishing the maximum distance from an adequate aerodrome.*

JAR OPS: 1.245  
14 CFR: 121.161; FAA AC 120-42A

### **8.6.2.11 EXTENDED RANGE OPERATIONS WITH TWIN-ENGINED AIRPLANES**

- (a) An AOC holder shall not conduct operations beyond the threshold distance determined in accordance with 8.6.2.10 unless approved to do so by the Authority.
- (b) Prior to conducting an ETOPS flight, an AOC holder shall ensure that a suitable ETOPS en-route alternate is available, within either the approved diversion time or a diversion time based on MEL generated serviceability status of the airplane, whichever is shorter.

ICAO Annex 6, Part I: 4.3.4.2, 4.7.1; 4.7.2; 4.7.3  
 14 CFR: 121.161; FAA AC 120-42A  
 JAR OPS: 1.246

*Note: The ICAO Doc 9760 contains guidance on the level of performance and reliability of airplane systems and continuing airworthiness aspects of the items in Section 8.6.2.11(b) above.*

### 8.6.2.12 EN ROUTE ALTERNATE AERODROMES— ETOPS OPERATIONS

- (a) The PIC shall ensure that the required en route alternates for ETOPS are selected and specified in ATC flight plans in accordance with the ETOPS diversion time approved by the Authority.
- (b) No person shall select an aerodrome as an ETOPS en-route alternate aerodrome unless the appropriate weather reports or forecasts, or any combination thereof, indicate that during a period commencing 1 hour before and ending 1 hour after the expected time of arrival at the aerodrome, the weather conditions will be at or above the planning minima prescribed in the table below, and in accordance with the operator's ETOPS approval.

*Note: The forecast weather criteria used in the selection of alternate aerodromes for IFR flight will also be used for the selection of ETOPS alternates.*

Type of Approach	Planning Minima (RVR/visibility required & ceiling, if applicable)	
	Aerodrome with	
	at least 2 separate approach procedures based on 2 separate aids serving 2 separate runways (See note 1)	at least 2 separate approach procedures based on 2 separate aids serving 1 runway or, at least 1 approach procedure based on 1 aid serving 1 runway
Precision Approach CAT I, III (ILS, MLS)	Precision Approach CAT I Minima	Non-Precision Approach Minima
Precision Approach CAT 1 (ILS, MLS)	Non-Precision Approach Minima	Circling minima or, if not available, non-precision approach minima plus 200 ft/1,000m
Non-Precision Approach	The lower of non-precision approach minima plus 200 ft/1,000 m or circling minima	The higher of non-precision approach minima plus 200 ft/1,000 m or circling minima
Circling Approach	Circling Minima	

*Note: Runways on the same aerodrome are considered to be separate runways when they are separate landing surfaces which may overlay or cross such that if one of the runways is blocked, it will not prevent the planned type of operations on the other runway and each of the landing surfaces has a separate approach based on a separate aid.*

ICAO Annex 6, Part I: 4.3.4.2, 4.7.3  
 JAR-OPS: 1.297(d)

### 8.6.2.13 FUEL, OIL, AND OXYGEN PLANNING AND CONTINGENCY FACTORS

- (a) No person may commence a flight unless he or she takes into account the fuel, oil, and oxygen needed to ensure the safe completion of the flight, including any reserves to be carried for contingencies.

- (b) Each person computing the required minimum fuel supply shall ensure that additional fuel, oil, and oxygen are carried to provide for the increased consumption that would result from any of the following contingencies—
  - (1) Expected winds or other meteorological conditions;
  - (2) Possible variations in ATC routings;
  - (3) Anticipated traffic delays;
  - (4) A complete instrument approach procedure and possible missed approach at destination;
  - (5) Loss of pressurisation en route;
  - (6) Loss of one power-unit en route; and
  - (7) Any other conditions that may delay landing of the aircraft or increase fuel and oil consumption.
- (c) Each person computing the required minimum fuel supply shall ensure that, for flights of more than 2,000 nm, the minimum fuel supply calculation includes an additional amount of fuel equal to that necessary to fly 10% of the total time for the flight from takeoff to destination.
- (d) No PIC may commence a flight to an aerodrome where no suitable alternate aerodrome is available because the destination aerodrome is isolated, without enough reserve fuel for two additional hour's flight at normal cruise consumption, at 1,500 ft above the aerodrome.
- (e) The Authority may grant specific approval for commercial air transport operations to isolated aerodromes without regard to consumption requirement of paragraph (d).

*Note: If the Authority requires that fuel, in addition to any other requirement herein, is necessary on a particular route or flight operation in the interest of safety, this additional fuel will be included in the minimum fuel supply for that route.*

ICAO Annex 6, Part I: 4.3.6.1; 4.3.6.4; 4.3.8.1; 4.3.8.2

ICAO Annex 6, Part II: 4.8.1; 4.9

ICAO Annex 6, Part III, Section II: 2.3.6.1; 2.3.6.3.3; 2.3.6.4; 2.3.8.1; 2.3.8.2; Annex 6, Part III, Section III: 2.8.1; 2.8.4; 2.9.1; 2.9.2

14 CFR: 121.647; 91.211

JAR OPS: 1.255, 1.350

#### **8.6.2.14 MINIMUM FUEL SUPPLY FOR VFR FLIGHTS**

- (a) No person may commence a flight in an airplane under VFR unless, considering the wind and forecast weather conditions, there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed—
  - (1) For flights during the day, for at least 30 minutes thereafter; or
  - (2) For flights during the night, for at least 45 minutes thereafter; and
  - (3) For international flights, for at least an additional 15% of the total flight time calculated for cruise flight.

- (b) No person may commence a flight in a helicopter under VFR unless (considering the wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed—
- (1) For 20 minutes thereafter; and
  - (2) For international flights, for at least an additional 10% of the total flight time calculated.

*ICAO Annex 6, Part I: 4.3.6.2.1*

*ICAO Annex 6, Part II: 4.8.1*

*ICAO Annex 6, Part III, Section II: 2.3.6.2; Annex 6, Part III, Section III: 2.8.2*

*14 CFR: 91.151, 135.209*

### 8.6.2.15 MINIMUM FUEL SUPPLY FOR IFR FLIGHTS

- (a) No person may commence a flight under IFR unless there is enough fuel supply, considering weather reports and forecasts, to—
- (1) Fly to the first point of intended landing and execute an instrument approach;
  - (2) Fly from the aerodrome to the planned alternate aerodrome, if required; and
  - (3) Fly thereafter at normal cruising speed:
    - (i) In a piston-powered airplane, for 45 minutes.
    - (ii) In a rotorcraft, turbojet or turbofan airplane, for 30 minutes at a holding speed at 450 m (1,000 ft) above the aerodrome, plus a reserve for contingencies specified by the operator and approved by the Authority.
- (b) For IFR flights to isolated aerodromes, the 2-hour minimum reserve specified in 8.6.2.13 applies, except paragraph (e) does not apply to commercial air transport operations unless specifically approved by the Authority.

*ICAO Annex 6, Part I: 4.3.6.2.1, 4.3.6.2.2, 4.3.6.3.1; 4.3.6.3.2*

*ICAO Annex 6, Part II: 4.8.1.1*

*ICAO Annex 6, Part III, Section II: 2.3.6.3; 2.3.6.3.1; 2.3.6.3.2; 2.3.6.3.3; Annex 6, Part III, Section III: 2.8.3; 2.8.3.1; 2.8.3.2; 2.8.3.3*

*14 CFR: 91.167, 121.639, 121.641, 121.643, 121.645, 125.375, 125.377*

### 8.6.2.16 FLIGHT PLANNING DOCUMENT DISTRIBUTION AND RETENTION— COMMERCIAL AIR TRANSPORT

- (a) For commercial air transport operations, the PIC shall complete and sign the following flight preparation documents before departure:
- (1) An operational flight plan, including NOTAMs and weather pertinent to the flight planning decisions regarding minimum fuel supply, en route performance, and destination and alternate aerodromes.
  - (2) A load manifest, showing the distribution of the load, centre of gravity, takeoff and landing mass and compliance with maximum operating mass limitations, and performance analysis.
  - (3) An applicable technical log page, if mechanical irregularities were entered after a previous flight, maintenance or inspection functions were performed or a maintenance release was issued at the departure aerodrome.

- (b) No person may takeoff an aircraft in commercial air transport unless all flight release documents, signed by the PIC, are retained and available at the point of departure.
- (c) The PIC shall carry a copy of the documents specified in paragraph (a) on the aircraft to the destination aerodrome.

*Note: These documents are in addition to those specified in Subpart 8.2 for all aircraft operations.*

*Note: The Authority may approve a different retention location where all documents can be available for subsequent review.*

ICAO Annex 6, Part I: 4.3.1, 4.3.2; 4.3.3.1  
ICAO Annex 6, Part III, Section II: 2.3.1; 2.3.2; 2.3.3.1

### **8.6.2.17 AIRCRAFT LOADING, MASS AND BALANCE**

- (a) No person may operate an aircraft unless all loads carried are properly distributed and safely secured.
- (b) No person may operate an aircraft unless the calculations for the mass of the airplane and centre of gravity location indicate that the flight can be conducted safely, taking into account the flight conditions expected.

*Note: When load masters, load planners or other qualified personnel are provided by the AOC holder in a commercial air transport operation, the PIC may delegate these responsibilities, but shall ascertain that proper loading procedures are followed.*

- (c) For commercial air transport operations, no PIC may commence a flight unless the PIC is satisfied that the loading and mass and balance calculations contained in the load manifest are accurate and comply with the aircraft limitations.

ICAO Annex 6, Part I: 4.3.1(d)(e)  
ICAO Annex 6, Part II: 4.4.1(d)(e)  
Part IIIA: 2.2.1(d)(e), Part IIIB: 2.4 (d)(e)

### **8.6.2.18 MAXIMUM ALLOWABLE MASS TO BE CONSIDERED ON ALL LOAD MANIFESTS**

- (a) The PIC shall ensure that the maximum allowable weight for a flight does not exceed the maximum allowable takeoff weight—
  - (1) For the specific runway and conditions existing at the takeoff time; and
  - (2) Considering anticipated fuel and oil consumption that allows compliance with applicable en route performance, landing mass, and landing distance limitations for destination and alternate aerodromes.

14 CFR: 121.693(b) (1-4)

### **8.6.2.19 FLIGHT RELEASE REQUIRED—COMMERCIAL AIR TRANSPORT**

- (a) No person may start a flight under a flight following system without specific authority from the person authorized by the AOC holder to exercise operational control over the flight.

- (b) No person may commence a passenger-carrying flight in commercial air transport unless a qualified person authorized by the AOC holder to perform operational control functions has issued a flight release for that specific operation or series of operations.

14 CFR: 121.535, 121.593, 121.597

### 8.6.2.20 OPERATIONAL FLIGHT PLAN: COMMERCIAL AIR TRANSPORT

- (a) No person may commence a flight unless the operational flight plan has been signed by the PIC.
- (b) A PIC may sign the operational flight plan only when the PIC and the person authorized by the operator to exercise operational control have determined that the flight can be safely completed.

*Note: The operational flight plan shall include the routing and fuel calculations, with respect to the meteorological and other factors expected, to complete the flight to the destination and all required alternates.*

- (c) The PIC signing the operational flight plan shall have access to the applicable flight planning information for fuel supply, alternate aerodromes, weather reports and forecasts and NOTAMs for the routing and aerodrome.
- (d) No person may continue a flight from an intermediate aerodrome without a new operational flight plan if the aircraft has been on the ground more than 6 hours.

ICAO Annex 6, Part I: 4.3.1(g), Part IIIA: 2, 3.1(g)

14 CFR: 121.595(a), 121.595(b), 121.597

## 8.7 AIRCRAFT OPERATING AND PERFORMANCE LIMITATIONS

### 8.7.1 ALL AIRCRAFT

#### 8.7.1.1 APPLICABILITY

This Section prescribes the operating and performance limitations for all civil aircraft.

#### 8.7.1.2 GENERAL

- (a) No person may operate an aircraft that—
  - (1) Exceeds its designed performance limitations for any operation, as established by the State of Registry; or
  - (2) Exceeds the operating limitations contained in the aircraft's flight manual, or its equivalent;

ICAO Annex 6, Part I, 5.1.1, 5.2.3

14 CFR: 121.173(d)

#### 8.7.1.3 AIRCRAFT PERFORMANCE CALCULATIONS

- (a) Each operator shall ensure that the performance data contained in the AFM, RFM, or other authorized source is used to determine compliance with the appropriate requirements of Subpart 8.7.
- (b) When applying performance data, each person performing calculations shall account for the aircraft configuration, environmental conditions, and the operation of any system or systems that may have an adverse effect on performance.

**8.7.1.4 GENERAL WEIGHT AND OBSTRUCTION CLEARANCE LIMITATIONS**

- (a) No person may takeoff an aircraft without ensuring that the maximum allowable mass for a flight does not exceed the maximum allowable takeoff or landing mass, or any applicable en route performance or landing distance limitations considering the—
- (1) Condition of the takeoff and landing areas to be used;
  - (2) Gradient of runway to be used (landplanes only);
  - (3) Pressure altitude;
  - (4) Ambient temperature;
  - (5) Current and forecast winds; and
  - (6) Any known conditions (e.g., atmospheric and aircraft configuration) which may adversely affect performance.
- (b) No person may takeoff an aircraft at a mass that, assuming normal engine operation, cannot safely clear all obstacles during all phases of flight, including all points along the intended en route path or any planned diversions.

*Annex 6, Part I: 4.3.1(f); Part II: 4.4.1; R4.4.2; Part IIA: 2.3.1(f); Part IIIB: 2.4,*

*14 CFR: 121.693(b)(1-4)  
JAR-OPS: 1.475 (b), 1.480.*

**8.7.2 AIRCRAFT USED IN COMMERCIAL AIR TRANSPORT****8.7.2.1 APPLICABILITY**

This Section prescribes aircraft performance and operating limitations for aircraft used in commercial air transport operations, except those aircraft holding a special authority or waiver by the Authority which exempt them from specific operating and performance limitations.

**8.7.2.2 GENERAL**

- (a) Each person operating an aircraft engaged in commercial air transport shall comply with the provisions of Section [8.7.2](#).
- (b) The Authority may authorize deviations from the requirements of Section [8.7.2](#) if special circumstances make a literal observance of a requirement unnecessary for safety.
- (c) Where full compliance with the requirements of Section [8.7.2](#) cannot be shown due to specific design characteristics (e.g., seaplanes, airships, or supersonic aircraft), the operator shall apply approved performance standards that ensure a level of safety not less restrictive than those of relevant requirements of this Section.
- (d) No person may operate a single-engine aircraft used for revenue passenger carrying operations unless that aircraft is continually operated in daylight, VFR, excluding over the top.
- (e) No person may operate a multiengine aircraft used for revenue passengers carrying operations that is unable to comply with any of the performance limitations of subsections [8.7.2.4](#) through [8.7.2.8](#) unless that aircraft is continually operated—



- (1) In daylight;
  - (2) In VFR, excluding over the top operations; and
  - (3) At a weight that will allow it to climb, with the critical engine inoperative, at least 50 ft a minute when operating at the MEAs of the intended route or any planned diversion, or at 5,000 ft MSL, whichever is higher.
- (f) Multiengine aircraft that are unable to comply with paragraph (e) (3) are, for the purpose of this Section, considered to be a single engine aircraft and shall comply with the requirements of paragraph (d).

*ICAO Annex 6:5.2.7, 5.2.8*  
*ICAO Doc. 9388:3.2.4.1, 3.2.5.1, 3.2.5.2*  
*14 CFR: 135.181(a), 121.177, 121.179, 121.189, 121.199*  
*JAR-OPS: 1.470, 1.490, 1.495, 1.565, 1.570, 1.575*

### 8.7.2.3 AIRCRAFT PERFORMANCE CALCULATIONS

- (a) No person may takeoff an aircraft used in commercial air transport without ensuring that the applicable operating and performance limitations required for this Section can be accurately computed based on the AFM, RFM, or other data source approved by the Authority.
- (b) Each person calculating performance and operating limitations for aircraft used in commercial air transport shall ensure that performance data used to determine compliance with this Section can, during any phase of flight, accurately account for—
  - (1) Any reasonably expected adverse operating conditions that may affect aircraft performance;
  - (2) One engine failure for aircraft having two engines, if applicable; and
  - (3) Two engine failure for aircraft having three or more engines, if applicable.
- (c) When calculating the performance and limitation requirements of subsections 8.7.2.4 to 8.7.2.8, each person performing the calculation shall, for all engines operating and for inoperative engines, accurately account for—
  - (1) In all phases of flight—
    - (i) The effect of fuel and oil consumption on aircraft mass;
    - (ii) The effect of fuel consumption on fuel reserves resulting from changes in flight paths, winds, and aircraft configuration;
    - (iii) The effect of fuel jettisoning on aircraft mass and fuel reserves, if applicable and approved;
    - (iv) The effect of any ice protection system, if applicable and weather conditions require its use;
    - (v) Ambient temperatures and winds along intended route and any planned diversion;
    - (vi) Flight paths and minimum altitudes required to remain clear of obstacles.
  - (2) During takeoff and landing—
    - (i) The condition of the takeoff runway or area to be used, including any contaminants (e.g., water, slush, snow, ice);
    - (ii) The gradient of runway to be used;
    - (iii) The runway length including clearways and stopways, if applicable;
    - (iv) Pressure altitudes at takeoff and landing sites;
    - (v) Current ambient temperatures and winds at takeoff;

- (vi) Forecast ambient temperatures and winds at each destination and planned alternate landing site;
- (vii) The ground handling characteristics (e.g., braking action) of the type of aircraft; and
- (viii) Landing aids and terrain that may affect the takeoff path, landing path, and landing roll.

*Note: Where conditions are different from those on which the performance is based, compliance may be determined by interpolation or by computing the effects of changes in the specific variables, if the results of the interpolation or computations are substantially as accurate as the results of direct tests.*

*Note: To allow for wind effect, takeoff and landing data based on still air may be corrected by taking into account not more than 50 percent of any reported headwind component and not less than 150 percent of any reported tailwind component, and landing data based on.*

ICAO Annex 6, Part I: 5.2.3, 5.2.4  
14 CFR: 121.175, 121.189, 121.195, 121.197  
JAR-OPS: 1.485(a)

#### 8.7.2.4 TAKEOFF LIMITATIONS

- (a) *Aeroplanes*. No person may takeoff an aeroplane used in commercial air transport unless the following requirements are met when determining the maximum permitted take-off mass:
  - (1) The takeoff run shall not be greater than the length of the runway.
  - (2) For turbine- powered aeroplanes—
    - (i) The takeoff distance shall not exceed the length of the runway plus the length of any clearway, except that the length of any clearway included in the calculation shall not be greater than 1/2 the length of the runway; and
    - (ii) The accelerate-stop distance shall not exceed the length of the runway, plus the length of any stopway, at any time during takeoff until reaching V<sub>1</sub>.
  - (3) For reciprocating engine powered aeroplanes—
    - (i) The accelerate-stop distance shall not exceed the length of the runway at any time during takeoff until reaching V<sub>1</sub>.
  - (4) If the critical engine fails at any time after the airplane reaches V<sub>1</sub>, to continue the takeoff flight path and clear all obstacles either—
    - (i) By a height of at least 9.1 m (35 ft) vertically for turbine-powered airplanes or 15.2 m (50 ft) for reciprocating engine powered aeroplanes; and
    - (ii) By at least 60 m (200 ft) horizontally within the aerodrome boundaries and by at least 90 m (300 ft) horizontally after passing the boundaries, without banking more than 15 degrees at any point on the takeoff flight path.
  - (5) Helicopters. [RESERVED]

#### 8.7.2.5 EN ROUTE LIMITATIONS: ALL ENGINES OPERATING

No person may take off a reciprocating engine powered aeroplane used in commercial air transport at a weight that does not allow a rate of climb of at least  $6.9 V_{so}$ , (that is, the number of feet per minute obtained by multiplying the aircraft's minimum steady flight speed by 6.9) with all engines

operating, at an altitude of at least 300 m (1,000 ft) above all terrain and obstructions within ten miles of each side of the intended track.

14 CFR: 121.179, 135.369  
JAR-OPS: 1.575

### 8.7.2.6 EN ROUTE LIMITATIONS: ONE ENGINE INOPERATIVE

- (a) *Aeroplane.* No person may take off an aeroplane used in commercial air transport having two engines unless that aeroplane can, in the event of a power failure at the most critical point en route, continue the flight to a suitable aerodrome where a landing can be made while allowing—
- (1) For reciprocating engine powered aeroplanes—
- (i) At least a rate of climb of  $0.079 - (0.106/\text{number of engines installed}) V_{so}^2$  (when  $V_{so}$  is expressed in knots) at an altitude of 300 m (1,000 ft) above all terrain and obstructions within 9.3 km (5 nm), on each side of the intended track; and
  - (ii) A positive slope at 1,500 feet above the aerodrome of intended landing; and
  - (iii) Enough fuel to continue to the aerodrome of intended landing, to arrive at an altitude of at least 1,500 feet directly over the aerodrome, and thereafter to fly for 15 minutes at cruise power.

*Note: The consumption of fuel and oil after the engine failure is the same as the consumption that is allowed for in the net flight path data in the FSM.*

- (2) For turbine-powered transport category aeroplanes—
- (i) A positive slope at an altitude of at least 300 m (1,000 ft) above all terrain and obstructions within 9.3 km (5 nm), on each side of the intended track;
  - (ii) A net flight path from cruising altitude to the intended landing aerodrome that allows at least 600 m (2,000 ft) clearance above all terrain and obstructions within 9.3 km (5 nm), on each side of the intended track; and
  - (iii) A positive slope at an altitude of at least 450 m (1,500 ft) above the aerodrome where the airplane is assumed to land;

*Note: The climb rate specified in paragraph (a)(1)(i) may be amended to  $0.026 V_{so}^2$  for large transport category aircraft issued a type certificate before 1953.*

*Note: The 9.3 km (5 nm) clearance margin stated in paragraph (a) shall be increased to 18.5 km (10 nm) if navigational accuracy does not meet the 95% containment level.*

- (b) Helicopter. [RESERVED]

### 8.7.2.7 EN ROUTE LIMITATIONS—TWO ENGINES INOPERATIVE

- (a) *Aeroplane.* No person may takeoff an airplane used in commercial air transport having three or more engines at such a mass where there is no suitable landing aerodrome within 90 minutes at any point along the intended route (with all engines operating at cruising power), unless that airplane can, in the event of simultaneous power failure of two critical engines at the most critical point along that route, continue to a suitable landing aerodrome while allowing—

- (1) For turbine-powered aeroplanes—
  - (i) A net flight path (considering the ambient temperatures anticipated along the track) clearing vertically by at least 600 m (2,000 ft) all terrain and obstructions within 9.3 km (five nautical miles) on each side of the intended track;
  - (ii) A positive slope at 450 m (1,500 ft) above the aerodrome of intended landing; and
  - (iii) Enough fuel to continue to the aerodrome of intended landing, to arrive at an altitude of at least 1,500 feet directly over the aerodrome, and thereafter to fly for 15 minutes at cruise power.

*Note: The consumption of fuel and oil after the engine failure is the same as the consumption that is allowed for in the net flight path data in the AFM.*

- (2) For reciprocating engine powered aeroplanes—
  - (i) A rate of climb at  $0.013 V_{so}^2$  feet per minute (that is, the number of feet per minute is obtained by multiplying the number of knots squared by 0.013) at an altitude of 1,000 feet above the highest ground or obstruction within 10 miles on each side of the intended track, or at an altitude of 5,000 feet, whichever is higher; and
  - (ii) Enough fuel to continue to the aerodrome of intended landing and to arrive at an altitude of at least 300 m (1,000 ft) directly over that aerodrome.

*Note: When the two engines of the reciprocating aeroplane are predicted to fail at an altitude above the prescribed minimum altitude, compliance with the prescribed rate of climb need not be shown during the descent from the cruising altitude to the prescribed minimum altitude, if those requirements can be met once the prescribed minimum altitude is reached, and assuming descent to be along a net flight path and the rate of descent to be  $0.013 V_{so}^2$  greater than the rate in the approved performance data.*

*Note: If fuel jettisoning is authorized (or planned), the aeroplane's weight at the point where the two engines fail is considered to be not less than that which would include enough fuel to proceed to an aerodrome and to arrive at an altitude of at least 300 m (1,000 ft) directly over that aerodrome.*

- (b) Helicopters. [RESERVED]

### 8.7.2.8 LANDING LIMITATIONS

- (a) *Aeroplane.* No person may take off an aeroplane used in commercial operations unless its mass on arrival at either the intended destination aerodrome or any planned alternate aerodrome would allow a full stop landing from a point 50 ft above the intersection of the obstruction clearance plane and the runway, and within—
  - (1) For turbine engine powered aeroplane, 60 percent of the effective length of each runway.
  - (2) For reciprocating engine powered aeroplanes, 70 percent of the effective length of each runway.
- (b) For the purpose of determining the allowable landing weight at the destination aerodrome, each person determining the landing limit shall ensure that—
  - (1) The aeroplane is landed on the most favorable runway and in the most favorable direction, in still air; or

- (2) The aeroplane is landed on the most suitable runway considering the probable wind velocity and direction, runway conditions, the ground handling characteristics of the airplane, and considering other conditions such as landing aids and terrain.

*Note: If the runway at the landing destination is reported or forecast to be wet or slippery, the landing distance available shall be at least 115 percent of the required landing distance unless, based on a showing of actual operating landing techniques on wet or slippery runways, a shorter landing distance (but not less than that required by paragraph (a)) has been approved for a specific type and model airplane and this information is included in the AFM.*

- (c) A turbine-powered transport category airplane that would be prohibited from taking off because it could not meet the requirements of paragraph (a)(1), may take off if an alternate aerodrome is specified that meets all the requirements of paragraph (a).
- (d) *Helicopters.* [RESERVED].
- (e) *Helicopters.* [RESERVED].

## 8.8 FLIGHT RULES

### 8.8.1 ALL OPERATIONS

#### 8.8.1.1 OPERATION OF AIRCRAFT ON THE GROUND

- (a) No person may taxi an aircraft on the movement area of an aerodrome unless the person at the controls—
  - (1) Has been authorized by the owner, the lessee, or a designated agent;
  - (2) Is fully competent to taxi the aircraft;
  - (3) Is qualified to use the radio if radio communications are required; and
  - (4) Has received instruction from a competent person in respect of aerodrome layout, and where appropriate, information on routes, signs, marking, lights, ATC signals and instructions, phraseology and procedures, and is able to conform to the operational standards required for safe aircraft movement at the aerodrome.
- (b) No person shall cause a helicopter rotor to be turned under power unless there is a qualified pilot at the controls. [RESERVED].

*ICAO Annex 6: Part I: 4.2.3.2, Part II: 2.2.3.2, 4.17, Part IIIB: 2.17*

#### 8.8.1.2 TAKEOFF CONDITIONS

- (a) Before commencing takeoff, a PIC shall ensure that—
  - (1) According to the available information, the weather at the aerodrome and the condition of the runway intended to be used will allow for a safe takeoff and departure; and
  - (2) The RVR or visibility in the takeoff direction of the aircraft is equal to or better than the applicable minimum.

### 8.8.1.3 FLIGHT INTO KNOWN OR EXPECTED ICING (RESERVED)

#### 8.8.1.4 ALTIMETER SETTINGS

(a) Each person operating an aircraft shall maintain the cruising altitude or flight level by reference to and altimeter set --

(1) Below 18,000 MLS to --

Note: The requirement does not apply when operating in airspace and on routes aircraft are required to use of 29.92" Hg. below 18,000 MLS.

- (I) The current reported altimeter setting of a station along the route and within 100 nautical miles of the aircraft;
- (II) The current report altimeter setting a nearby station, if there is not a station along the route; or
- (III) In the case of an aircraft not equipped aerodrome or an appropriate altimeter setting available before departure; or

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

See Implementing Standard for a table to determine the lowest usable flight level.

#### 8.8.1.5 MINIMUM SAFE ALTITUDES—GENERAL

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

- (1) *Anywhere.* An altitude allowing, if a power unit fails, continuation of flight or an emergency landing without undue hazard to persons or property on the surface.
- (2) *Over congested areas.* Over any congested area of a city, town, or settlement, or over any open-air assembly of persons, an altitude of 300 m (1,000 ft) above the highest obstacle within a horizontal radius of 600 m (2,000 ft) of the aircraft.
- (3) *Over other than congested areas.* An altitude of 150 m (500 ft) above the surface, except over open water or sparsely populated areas where the aircraft may not be operated closer than 150 m (500 ft) to any person, vessel, vehicle, or structure.
- (4) *Helicopters.* The above provision shall apply to helicopters to the same extent as fixed-wing aircraft.

14 CFR: 91.119

JAR-OPS: 1.365

ICAO Annex 2: 3.2.2, 4.6, Annex6, Part IIIA: 2.2.6 ICAO Annex 6, Part III, Section II: 2.2.6.1; 2.2.6.2

#### 8.8.1.6 MINIMUM SAFE VFR ALTITUDES: COMMERCIAL AIR TRANSPORT OPERATIONS

- (1) No person may operate an airplane during the day, under VFR, at an altitude less than 1,000 ft above the surface or within 1,000 ft of any mountain, hill, or other obstruction to flight.
- (2) No person may operate an aeroplane at night, under VFR, at an altitude less than 1,000 feet above the highest obstacle within a horizontal distance of five miles from the centre of the

intended course, or, in designated mountainous areas, less than 2,000 feet above the highest obstacle within a horizontal distance of 5 miles from the centre of the intended course.

14 CFR: 121. 657  
ICAO Annex 6, Part I

### 8.8.1.7 INSTRUMENT APPROACH OPERATING MINIMA

- (a) No person may operate to or from an aerodrome using operating minima lower than those which may be established for that aerodrome by the State in which it is located, unless that State specifically approves that operation

### 8.8.1.8 CATEGORY II AND III OPERATIONS: GENERAL OPERATING RULES

- (a) No person may operate a civil aircraft in a Category II or III operation unless—
  - (1) The PIC and CP of the aircraft hold the appropriate authorizations and ratings prescribed in 2.2.1.6.
  - (2) Each flight crew member has adequate knowledge of, and familiarity with, the aircraft and the procedures to be used; and
  - (3) The instrument panel in front of the pilot who is controlling the aircraft has appropriate instrumentation for the type of flight control guidance system that is being used.
- (b) Unless otherwise authorized by the Authority, no person may operate a civil aircraft in a Category II or Category III operation unless each ground component required for that operation and the related airborne equipment is installed and operating.
- (c) When the approach procedure being used provides for and requires the use of a DH, the authorized DH is the highest of the following:
  - (1) The DH prescribed by the approach procedure.
  - (2) The DH prescribed for the PIC.
  - (3) The DH for which the aircraft is equipped.
- (d) Unless otherwise authorized by the Authority, no pilot operating an aircraft in a Category II or Category III approach that provides and requires use of a DH may continue the approach below the authorized decision height unless the following conditions are met:
  - (1) The aircraft is 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 where that descent rate will allow touchdown to occur within the touchdown zone of the runway of intended landing.
  - (2) At least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:
    - (i) The approach light system, except that the pilot may not descend below 100 ft 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.
    - (ii) The threshold.
    - (iii) The threshold markings.
    - (iv) The threshold lights.
    - (v) The touchdown zone or touchdown zone markings.
    - (vi) The touchdown zone lights.

- (e) Unless otherwise authorized by the Authority, each pilot operating an aircraft shall immediately execute an appropriate missed approach whenever, prior to touchdown, the requirements of paragraph (d) of this section are not met.
- (f) No person operating an aircraft using a Category III approach without DH may land that aircraft except in accordance with the provisions of the letter of authorization issued by the Authority.
- (g) Paragraphs (a) through (f) of this section do not apply to operations conducted by AOC holders issued a certificate under Part 9. No person may operate a civil aircraft in a Category II or Category III operation conducted by an AOC holder unless the operation is conducted in accordance with that AOC holder's operations specifications.

14 CFR: 91.189

#### 8.8.1.9 CATEGORY II AND CATEGORY III MANUAL

- (a) Except as provided in paragraph (c) of this section, no person may operate a civil aircraft in a Category II or a Category III operation unless—
  - (1) There is available in the aircraft a current and approved Category II or Category III manual, as appropriate, for that aircraft;
  - (2) The operation is conducted in accordance with the procedures, instructions, and limitations in the appropriate manual; and
  - (3) The instruments and equipment listed in the manual that are required for a particular Category II or Category III operation have been inspected and maintained in accordance with the maintenance programme contained in the manual.
- (b) Each operator must keep a current copy of each approved manual at its principal base of operations and must make each manual available for inspection upon request by the Authority.
- (c) Paragraphs (a) and (b) do not apply to operations conducted by an AOC holder issued a certificate under Part 9.

14 CFR: 91.191

#### 8.8.1.10 AUTHORIZATION FOR DEVIATION FROM CERTAIN CATEGORY II OPERATIONS

The Authority may authorize deviations from the requirements of 8.8.1.8 and 8.8.1.9 for the operation of small aircraft Category II operations if the Authority finds that the proposed operation can be safely conducted.

*Note: Such authorization does not permit operation of the aircraft carrying persons or property for compensation or hire.*

14 CFR: 91.193

#### 8.8.1.11 DIVERSION DECISION

- (a) Except as provided in paragraph (b), the PIC shall land the aircraft at the nearest suitable aerodrome at which a safe landing can be made whenever an engine of an aircraft fails or is shut down to prevent possible damage.



- (b) If not more than one engine of an airplane having three or more engines fails, or its rotation is stopped, the PIC may proceed to an aerodrome if he or she decides that proceeding to that aerodrome is as safe as landing at the nearest suitable aerodrome after considering the—
- (1) Nature of the malfunction and the possible mechanical difficulties that may occur if flight is continued;
  - (2) Altitude, weight, and usable fuel at the time of engine stoppage;
  - (3) Weather conditions en route and at possible landing points;
  - (4) Air traffic congestion;
  - (5) Kind of terrain; and
  - (6) Familiarity with the aerodrome to be used.

14 CFR: 121.565(b)(1)-(6)

### 8.8.1.12 OPERATING NEAR OTHER AIRCRAFT

- (a) No person may operate an aircraft so close to another aircraft as to create a collision hazard.
- (b) No person may operate an aircraft in formation flight except by the arrangement with the PIC if each aircraft in the formation.
- (c) No person may operate an aircraft, carrying passengers for hire, in formation flight.

ICAO Annex 2: 3.1.8, 3.2.1  
14 CFR: 91.111

### 8.8.1.13 RIGHT-OF-WAY RULES—EXCEPT WATER OPERATIONS

- (a) General.
  - (1) Each pilot shall maintain vigilance so as to see and avoid other aircraft; and
  - (2) When a rule of this subsection gives 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.
- (b) In distress. An aircraft in distress has the right-of-way over all other air traffic.
- (c) Converging.
  - (1) 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.
  - (2) If the converging aircraft are of different categories—
    - (i) A balloon has the right-of-way over any other category of aircraft;
    - (ii) A glider has the right-of-way over an airship, aeroplane, or rotorcraft; and
    - (iii) An airship has the right-of-way over an aeroplane or rotorcraft.
- (d) Towing or refueling. An aircraft towing or refueling other aircraft has the right-of-way over all other engine-driven aircraft, except aircraft in distress.

- (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, whether climbing, descending or in horizontal flight, shall alter course to the right to pass well clear.
- (g) Landing. Aircraft, while on final approach to land or while landing, have the right-of-way over other aircraft in flight or operating on the surface.
- (h) More than one landing aircraft. When two or more aircraft are approaching an aerodrome for the purpose of landing, the aircraft at the lower altitude has the right-of-way.

Note: the PIC will not take advantage of this rule to cut in front of another which is on approach to land or to overtake that aircraft.

*ICAO Annex 2: 3.2.2  
14 CFR: 91.113*

#### **8.8.1.14 RIGHT-OF-WAY RULES: WATER OPERATIONS[RESERVED]**

#### **8.8.1.15 USE OF AIRCRAFT LIGHTS**

- (a) If an aircraft has red rotating beacon lights installed, the pilot shall switch those lights on prior to starting engines and display those lights at all times the engines are running.
- (b) No person may operate an aircraft between the period from sunset to sunrise unless—
  - (1) It has lighted navigation lights; and
  - (2) If anti-collision lights are installed, those lights are lighted.

Note: a pilot is permitted to switch off or reduce the intensity of any flashing lights if they do or are likely to adversely affect the satisfactory performance of duties or to subject an outside observer to harmful dazzle.

- (c) No person may park or move an aircraft at night in, or in a dangerous proximity to, a movement area of an aerodrome, unless the aircraft—
  - (1) Is clearly illuminated;
  - (2) Has lighted navigation lights, or
  - (3) Is in an area that is marked by obstruction lights
- (d) No person may anchor an aircraft unless that aircraft—
  - (1) Has lighted anchor lights; or
  - (2) Is in an area where anchor lights are not required on vessels.

*ICAO Annex 2: 3.2.3*

**8.8.1.16 SIMULATED INSTRUMENT FLIGHT**

- (a) No person may simulate an abnormal or emergency situation during commercial air transport operations.
  - (1) That aircraft has fully functioning dual controls;
  - (2) The other control seat is occupied by a safety pilot who holds at least a private pilot license with category and class ratings appropriate to the aircraft being flown, and
  - (3) The safety pilot has adequate vision forward and to each side of the aircraft, or a competent observer in the aircraft adequately supplements the vision of the safety pilot.
- (b) No person may engage in simulated instrument flight conditions during commercial air transport operations.

*ICAO Annex 2:3.2.4  
14 CFR: 91.109(b)*

**8.8.1.17 INFLIGHT SIMULATION OF ABNORMAL SITUATIONS**

No person may simulate an abnormal or emergency situation during commercial air transport operations.

*ICAO Annex 6, Part 1: 4.2.4  
JAR-OPS 1:1*

**8.8.1.18 DROPPING, SPRAYING, TOWING**

- (a) Except under conditions prescribed by the Authority, no pilot may take the following actions—
  - (1) Dropping, dusting or spraying from an aircraft;
  - (2) Towing of aircraft or other objects; or
  - (3) Allowing parachute descents.

*ICAO Annex 2: 3.1.4, 4.5,6  
14 FR: 91.91.15, 91.309, 91.303, 91.307(b)*

**8.8.1.19 AEROBATIC FLIGHT**

- (a) No person may operate an aircraft in aerobatic flight—
  - (1) Over any city, town or settlement;
  - (2) Over an open air assembly of persons;
  - (3) Within the lateral boundaries of the surface areas of Class B, C, D or E airspace designated for an aerodrome;
  - (4) Below an altitude of 1,500 feet above the surface; or
  - (5) When the flight visibility is less than 3 statute miles.

- (b) No person may operate an aircraft in maneuver exceeding a bank of 60 degrees or pitch of 30 degrees from level flight attitude unless all occupants of the aircraft are wearing parachutes packed by a qualified parachute rigger in the past 12 calendar months.

ICAO Annex 2: 3.1.7  
14 CFR: 91.303: 91.307(c)

#### 8.8.1.20 FLIGHT TEST AREAS

No person may flight-test an aircraft except over open water, or sparsely populated areas having light traffic.

14 CFR: 91.305

#### 8.8.1.21 PROHIBITED AREAS AND RESTRICTED AREAS

No person may operate an aircraft in a prohibited area, or in restricted areas, the particulars of which have been duly published, except in accordance with the conditions of the restrictions or by permission of the State over whose territory the areas are established.

ICAO Annex 2: 3.1.10  
14 CFR: 91.133

#### 8.8.1.22 OPERATIONS IN MNPS OR RVSM AIRSPACE

- (a) No person may operate a civil aircraft of Federated States of Micronesia registry in the North Atlantic airspace designated as MNPS airspace or in airspace designated as RVSM without a written authorization issued by the Authority.
- (b) No person may operate an aircraft in MNPS or RVSM airspace, except in accordance with the conditions of the procedures and restrictions required for this airspace.

14 CFR: 91.705  
JAR-OPS: 1.241, 1.243

*Note – See 7.1.2.7 for requirements regarding navigation equipment for operations in MNPS airspace.*

#### 8.8.1.23 OPERATIONS ON OR IN THE VICINITY OF AN UNCONTROLLED AERODROME

- (a) When approaching to land at an aerodrome without an operating control tower, each pilot of –
  - (1) An aeroplane shall make all turns of that aeroplane to the left; or to the right, if appropriately indicated by the authorities having jurisdiction over that aerodrome;
  - (2) A helicopter shall avoid the flow of aeroplanes. [RESERVED].
- (b) When departing an aerodrome without an operating control tower, each pilot of an aircraft shall comply with any traffic patterns established by the authorities having jurisdiction over that aerodrome.
- (c) Each pilot of an aircraft shall land and takeoff into the wind unless safety, the runway configurations, or traffic considerations determine that a different direction is preferable.

See Implementing Standards for the appropriate displays of night signals or visual markings.

14 CFR: 91.126  
ICAO Annex 2:3.2.5

**8.8.1.24 AERODROME TRAFFIC ALTITUDES: TURBOJET, TURBOFAN, OR LARGE AIRCRAFT**

- (a) When arriving at an aerodrome, the PIC of a turbojet, turboprop, or large aircraft shall enter the traffic pattern at least 1,500 feet AGL until further descent is required for landing.
- (b) When departing, the PIC of a turbojet, turboprop, or large aircraft shall climb to 1,500 AGL as rapidly as practicable.

*14 CFR: 91.126, 91.127, 91.129, 91.130*

**8.8.1.25 COMPLIANCE WITH VISUAL AND ELECTRONIC GLIDE SLOPES**

- (a) The PIC of an aeroplane 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.
- (b) The PIC of a turbojet, turboprop, or large aeroplane approaching to land on a runway served by an ILS shall fly that aeroplane at or above the glide slope from the point of interception to the middle marker.

*14 CFR: 91.129(e)*

**8.8.1.26 RESTRICTION OR SUSPENSION OF OPERATIONS: COMMERCIAL AIR TRANSPORT**

If a PIC or an AOC holder knows of conditions, including aerodrome and runway conditions, that are a hazard to safe operations, that person shall restrict or suspend all commercial air transport operations to such aerodromes and runways as necessary until those conditions are corrected.

*14 CFR: 121.551, 121.553.*

**8.8.1.27 CONTINUATION OF FLIGHT WHEN DESTINATION AERODROME IS TEMPORARILY RESTRICTED: COMMERCIAL AIR TRANSPORT**

- (a) No PIC may allow a flight to continue toward any aerodrome of intended landing where commercial air transport operations have been restricted or suspended, unless-
  - (1) In the opinion of the PIC, the conditions that are a hazard to safe operations may reasonably be expected to be corrected by the estimated time of arrival; or
  - (2) There is no safer procedure.

*14 CFR: 121.627*

**8.8.1.28 INTERCEPTION**

When intercepted by a military or government aircraft, each PIC shall comply with the international standards when interpreting and responding to visual signals as specified in the implementing standards.

See Implementing Standards for signals applicable to interception.

*ICAO Annex 2:3.8.2*

## 8.8.2 CONTROL OF AIR TRAFFIC

### 8.8.2.1 ATC CLEARANCES

- (a) Each PIC shall obtain an ATC clearance before operating a controlled flight, or a portion of a flight as a controlled flight.
- (b) Each PIC shall request an ATC clearance through the submission of a flight plan to an ATC facility.
- (c) Whenever an aircraft has requested a clearance involving priority, each PIC shall submit a report explaining the necessity for such priority, if requested by the appropriate ATC facility.
- (d) No person operating an aircraft on a controlled aerodrome may taxi on the maneuvering area or any runway without clearance from the aerodrome control tower.

ICAO Annex 2: 3.6.1.1, 2, 4  
14 CFR: 91.173

### 8.8.2.2 ADHERENCE TO ATC CLEARANCES

- (a) When an ATC clearance has been obtained, no PIC may deviate from the clearance, except in an emergency, unless he or she obtains an amended clearance.

*Note: A flight plan may cover only part of a flight, as necessary, to describe that portion of the flight or those maneuvers which are subject to ATC. A clearance may cover only part of a current flight plan, as indicated in a clearance limit or by reference to specific maneuvers such as taxiing, landing or taking off.*

*Note: Paragraph 8.8.2.2(a) does not prohibit a pilot from cancelling an IFR clearance when operating in VMC conditions or cancelling a controlled flight clearance when operating in airspace that does not require controlled flight.*

- (b) When operating in airspace requiring controlled flight, no PIC may operate contrary to ATC instructions, except in an emergency.
- (c) Each PIC who deviates from an ATC clearance or instructions in an emergency, shall notify ATC of that deviation as soon as possible.

ICAO Annex 2: 3.6.2. 1 & 3

### 8.8.2.3 COMMUNICATIONS

Each person operating an aircraft on a controlled flight shall maintain a continuous listening watch on the appropriate radio frequency of, and establish two-way communication as required with, the appropriate ATC facility.

*Note: More specific procedures may be prescribed by the appropriate ATC authority in respect of aircraft forming part of aerodrome traffic at a controlled aerodrome.*

*Note: Automatic signaling devices may be used to satisfy the requirement to maintain a continuous listening watch, if authorized by the Authority.*

ICAO Annex 2: 3.6.4.7, 5.2, 5.3.2  
14 CFR: 91.183

**8.8.2.4 ROUTE TO BE FLOWN**

- (a) Unless otherwise authorized or directed by the appropriate ATC facility, the PIC of a controlled flight shall, in so far as practicable—
- (1) When on an established ATC route, operate along the defined centre line of that route; or
  - (2) When on any other route, operate directly between the navigation facilities and/or points defining that route.
- (b) The PIC of a controlled flight operating along an ATC route defined by reference to VORs shall change over for primary navigation guidance from the facility behind the aircraft to that ahead of it at, or as close as operationally feasible to, the change-over point, where established.

*Note: These requirements do not prohibit maneuvering the aircraft to pass well clear of other air traffic or the maneuvering of the aircraft in VFR conditions to clear the intended flight path both before and during climb or descent.*

ICAO Annex 2: 3.6.2, 1 & 2  
14 CFR: 91.91.181

**8.8.2.5 INADVERTENT CHANGES**

- (a) A PIC shall take the following action in the event that a controlled flight inadvertently deviates from its current flight plan:
- (1) Deviation from track. If the aircraft is off track, the PIC shall adjust the heading of the aircraft to regain track as soon as practicable.
  - (2) Variation in true airspeed. Each PIC shall inform the appropriate ATC facility if the average true airspeed at cruising level between reporting points varies from that given in the flight plan or is expected to vary by plus or minus 5 per cent of the true airspeed.
  - (3) Change in time estimate. Each PIC shall notify the appropriate ATC facility and give a revised estimated time as soon as possible if the time estimate for a reporting point, flight information region boundary, or destination aerodrome, whichever comes first, is found to be in excess of three minutes from that notified to ATC, or such other period of time as is prescribed by the appropriate ATC authority or on the basis of air navigation regional agreements.

ICAO Annex 2: 3.6.2.2

**8.8.2.6 ATC CLEARANCE :INTENDED CHANGES**

- (a) Requests for flight plan changes shall include the following information:
- (1) Change of cruising level. Aircraft identification, requested new cruising level and cruising speed at this level, and revised time estimates, when applicable, at subsequent flight information region boundaries.
  - (2) Change of route-
    - (i) Destination unchanged. Aircraft identification, flight rules; description of new route of flight including related flight plan data beginning with the position from which requested change of route is to commence; revised time estimates, and any other pertinent information.

- (ii) Destination change. Aircraft identification; flight rules; description of revised route of flight to revised destination aerodrome including related flight plan data, beginning with the position from which requested change of route is to commence; revised time estimates; alternate aerodrome(s); any other pertinent information.

ICAO Annex 2: 3.6.2.3

### 8.8.2.7 POSITION REPORTS

- (a) Each pilot of a controlled flight shall report to the appropriate ATC facility, as soon as possible, the time and level of passing each designated compulsory reporting point, together with any other required information, unless exempted from this requirement by the appropriate ATC authority.
- (b) Each pilot of a controlled flight shall make position reports in relation to additional points or intervals when requested by the appropriate ATC facility.

ICAO Annex 2: 3.6.3  
14 CFR: 91.183(a)

### 8.8.2.8 OPERATIONS ON OR IN THE VICINITY OF A CONTROLLED AERODROME

- (a) No person may operate an aircraft to, from, through, or on an aerodrome having an operational control tower unless two-way communications are maintained between that aircraft and the control tower.
- (b) On arrival, each PIC shall establish communications required by paragraph (a) prior to 4 nautical miles from the aerodrome when operating from the surface up to and including 2,500 ft.
- (c) On departure, each PIC shall establish communications with the control tower before taxi.
- (d) Takeoff, landing, taxi clearance. No person may, at any aerodrome with an operating control tower, operate an aircraft on a runway or taxiway or takeoff or land an aircraft, unless an appropriate clearance has been received by ATC.

*Note: A clearance to "taxi to" the takeoff runway is not a clearance to cross or taxi on to that runway. It does authorize the PIC to cross other runways during the taxi to the assigned runway. A clearance to "taxi to" any other point on the aerodrome is a clearance to cross all runways that intersect the taxi route to the assigned point.*

- (e) Communications failure. If the radio fails or two-way communication is lost, a PIC may continue a VFR flight operation and land if:
  - (1) The weather conditions are at or above basic VFR minimums; and
  - (2) Clearance to land is received by light signals.

Note: during IFR operations, the two-way communications failure procedures will apply.

14 CFR: 91.127, 129, 130

### 8.8.2.9 UNLAWFUL INTERFERENCE

- (a) A PIC shall, when and if possible, notify the appropriate ATC facility when an aircraft is being subjected to unlawful interference, including—
  - (1) Any significant circumstances associated with the unlawful interference, and



- (2) Any deviation from the current flight plan necessitated by the circumstances.

ICAO Annex 2: 3.7.1

### 8.8.2.10 TIME CHECKS

- (a) Each PIC shall use Co-ordinated Universal Time (UTC), expressed in hours and minutes of the 24-hour day beginning at midnight, in flight operations.
- (b) Each PIC shall obtain a time check before operating a controlled flight and at such other times during the flight as may be necessary.

ICAO Annex 2: 3.5

### 8.8.2.11 UNIVERSAL SIGNALS

- (a) Upon observing or receiving any of the designated universal aviation signals, each person operating an aircraft shall take such action as may be required by the interpretation of the signal.
- (b) Universal signals shall have only the meaning designated.
- (c) Each person using universal signals in the movement of aircraft shall only use them for the purpose indicated.
- (d) No person may use signals likely to cause confusion with universal aviation signals.

*See Implementing Standards for a list of universal aviation signals.*

ICAO Annex 2: 3.4.1; 3.4.2  
14 CFR: 91.125

## 8.8.3 VFR FLIGHT RULES

### 8.8.3.1 VISUAL METEOROLOGICAL CONDITIONS

- (a) No person may operate an aircraft under VFR when the flight visibility is less than, or at a distance from the clouds that is less than that prescribed, or the corresponding altitude and class of airspace in the following table-

Airspace and VMC Minimums*			
Airspace Class	A***B C D E	F G	
		Above 900m (3,000 ft) AMSL or above 300m (1,000 ft) above terrain, whichever is the higher	At and below 900m (3,000 ft) AMSL or 300m (1,000 ft) above terrain, whichever is the higher
Distance from cloud	1,500 m horizontally 300m (1,000 ft) vertically	Clear of cloud and in sight of the surface	
Flight visibility	8 km at and above 3,050 m (10,000 ft) AMSL 5 km below 3,050m (10,000 ft) AMSL	5km	
When the height of the transition altitude is lower than 3,050 in (10,000 ft) AMSL, FL 100 should be used in lieu of 10,000 ft.			

**8.8.3.2 VFR WEATHER MINIMUMS FOR TAKEOFF AND LANDING**

- (a) No person may land or takeoff an aircraft under VFR from an aerodrome located in Class B, Class C, Class D or Class airspace unless the-
  - (1) Reported ceiling is at least 1,000 feet; and
  - (2) Reported ground visibility is at least 3 statute miles, if reported.
- (b) If the ground visibility is not reported, the pilot shall maintain 3 statute miles flight visibility.
- (c) Class G Airspace. No person may enter the traffic pattern, land or takeoff an aeroplane under VFR from an aerodrome located in Class G airspace below 1,200 AGL unless-
  - (1) For aeroplanes. The visibility is at least 1 statute mile and the aircraft can be operated clear of clouds within one-half mile of the runway; or
  - (2) For helicopter, the helicopter can be operated clear of clouds at a speed that allows the pilot adequate opportunity to see any air traffic or obstruction in time to avoid a collision.

[RESERVED]

*Note: The only exception to the required weather minimums of this subsection is during a Special VFR operation.*

ICAO Annex 2:4.1, Table 4.1(b), 4.2  
14 CFR: 91.155(b)(d)

**8.8.3.3 SPECIAL VFR OPERATIONS**

- (a) No person may conduct a Special VFR flight operation to enter the traffic pattern, land or takeoff an aeroplane under Special VFR from an aerodrome located in Class B, Class C, Class D or Class airspace unless:
  - (1) Authorized by an ATC clearance;
  - (2) The aircraft remains clear of clouds; and
  - (3) The flight visibility is at least 1 statute mile.
- (b) No person may conduct a Special VFR flight operation in an aircraft between sunset and sunrise unless the-
  - (1) The PIC is current and qualified for IFR operations; and
  - (2) The aircraft is qualified to be operated for IFR flight.

ICAO Annex 2: 4.1, Table 4.1 (b), 4.2  
14 CFR: 91.155(b)(d)

**8.8.3.4 VFR CRUISING ALTITUDES**

- (a) Each person operating an aircraft in level cruising flight under VFR at altitudes above 900 m (3,000 ft) from the ground or water, shall maintain;
  - (1) For magnetic courses from zero degrees to 179 degrees, any odd thousand MSL altitude or flight level plus 500 feet (such as 3, 500, 5, 500 or FL 215).
  - (2) For magnetic courses from 180 degrees to 359 degrees, any even thousand MSL altitude or flight level plus 500 feet ( such as 4, 500, 6, 500 Or FL 225).

*Paragraph (a) does not apply when otherwise authorized by ATC, when operating in a holding pattern, or during maneuvering in turns.*

*ICAO Annex 2:3.1.3, 4.7  
14 CFR: 91.159*

### 8.8.3.5 ATC CLEARANCES FOR VFR FLIGHTS

- (a) Each pilot of a VFR flight shall obtain and comply with ATC clearances and maintain a listening watch before and during operations-
- (1) Within Classes B, C, D airspace;
  - (2) As part of aerodrome traffic at controlled aerodrome; and
  - (3) Under Special VFR.

*ICAO Annex 2: 4.8*

### 8.8.3.6 VFR FLIGHTS REQUIRING ATC AUTHORIZATION

- (a) Unless authorized by the appropriate ATC authority, no pilot may operate in VFR flight—
- (1) Above FL 200; or
  - (2) At transonic and supersonic speeds.

Note: ATC authorization for VFR flights may not be granted in areas where a vertical separation minimum of only 300m (1,000 ft) applied above FL 290.

*ICAO Annex 2: 4. 4.4, 4.5*

### 8.8.3.7 WEATHER DETERIORATION BELOW VMC

- (a) Each pilot of a VFR flight operated as a controlled flight shall, when he or she finds it is not practical or possible to maintain flight in VMC in accordance with the ATC flight plan—
- (1) Request an amended clearance enabling the aircraft to continue in VMC to its destination or to an alternative aerodrome, or to leave the airspace within which an ATC clearance is required;
  - (2) If no clearance can be obtained, continue to operate in VMC and notify the appropriate ATC facility of the action being taken either to leave the airspace concerned or to land at the nearest suitable aerodrome;
  - (3) Operating within a control zone, request authorization to operate as a special VFR flight; or
  - (4) Request clearance to operate in IFR, if currently rated for IFR operations.

*ICAO Annex 2: 3.6.2.4*

### 8.8.3.8 CHANGING FROM VFR TO IFR

- (a) Each pilot operating in VFR who wishes to change to IFR shall—
- (1) If a flight plan was submitted, communicate the necessary changes to be effected to its current flight plan; or
  - (2) Submit a flight plan to the appropriate ATC facility and obtain a clearance before proceeding IFR when in controlled airspace.

*ICAO Annex 2: 4.10*

### 8.8.3.9 TWO-WAY RADIO COMMUNICATION FAILURE IN VFR

- (a) If radio failure occurs in VFR while under ATC control, or if VFR conditions are encountered after the failure, each pilot shall—
  - (1) Continue the flight under VFR;
  - (2) Land at the nearest suitable aerodrome; and
  - (3) Report arrival to ATC by the most expeditious means possible.

## 8.8.4 IFR FLIGHT RULES

### 8.8.4.1 IFR IN CONTROLLED AIRSPACE

- (a) No person may operate an aircraft in controlled airspace under IFR unless that person has—
  - (1) Filed an IFR flight plan; and
  - (2) Received an appropriate ATC clearance.

ICAO Annex 2: 3.3.1.2; 3.6.1.1  
14 CFR: 91.173

### 8.8.4.2 IFR FLIGHTS OUTSIDE CONTROLLED AIRSPACE

- (a) Each PIC of an IFR flight operating outside controlled airspace but within or into areas, or along routes, designated by the appropriate ATC authority, shall maintain a listening watch on the appropriate radio frequency and establish two-way communication, as necessary, with the ATC facility providing flight information service.
- (b) Each PIC of an IFR flight operating outside controlled airspace for which the appropriate ATC authority requires a flight plan, a listening watch on the appropriate radio frequency and establishment of two-way communication, as necessary, with the ATC facility providing flight information service, shall report position as specified for controlled flights.

ICAO Annex 2: 5.3.2, 5.3.3

### 8.8.4.3 IFR TAKEOFF MINIMUMS FOR COMMERCIAL AIR TRANSPORT

- (a) Unless otherwise authorized by the Authority, no pilot operating an aircraft in commercial air transport operations may accept a clearance to take off from a civil aerodrome under IFR unless weather conditions are at or above—
  - (1) For aircraft, other than helicopters, having two engines or less— 1 statute mile visibility.
  - (2) For aircraft having more than two engines— 1/2 statute mile visibility.
  - (3) For helicopters—1/2 statute mile visibility.

14 CFR: 135.225(f)-(h)

### 8.8.4.4 MINIMUM ALTITUDES FOR IFR OPERATIONS

- (a) *Operation of aircraft at minimum altitudes.* Except when necessary for takeoff or landing, no person may operate an aircraft under IFR below—
  - (1) The applicable minimum altitudes prescribed by the authorities having jurisdiction over the airspace being overflown; or

- (2) If no applicable minimum altitude is prescribed by the authorities—
    - (i) Over high terrain or in mountainous areas, at a level which is at least 600 m (2,000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft; and
    - (ii) Elsewhere than as specified in paragraph (i), at a level which is at least 300 m (1,000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft.
  - (3) If an MEA and a MOCA are prescribed for a particular route or route segment, a person may operate an aircraft below the MEA down to, but not below, the MOCA, when within 22 nautical miles of the VOR concerned.
- (b) *Climb for obstacle clearance.*
- (1) If unable to communicate with ATC, each pilot shall climb to a higher minimum IFR altitude immediately after passing the point beyond which that minimum altitude applies
  - (2) If ground obstructions intervene, each pilot shall climb to a point beyond which that higher minimum altitude applies, at or above the applicable Minimum Crossing Altitude (MCA).

*ICAO Annex 2: 5.1.2, Annex 6, Part IIIA: 2.2.6.1  
14 CFR: 91.177*

#### 8.8.4.5 MINIMUM ALTITUDES FOR USE OF AN AUTOPILOT

- (a) For en route operations, no person may use an autopilot at an altitude above the terrain that is less than 500 feet.

*Note: If the maximum altitude loss specified in the AFM for a malfunction under cruise conditions when multiplied by two is more than 500 feet, then it becomes the controlling minimum altitude for use of the autopilot.*

- (b) For instrument approach operations, no person may use an autopilot at an altitude above the terrain that is less than 50 feet below the MDA or DH.

*Note: If the maximum altitude loss specified in the AFM for a malfunction under approach conditions when multiplied by two is more than 50 feet, then it becomes the controlling minimum altitude for use of the autopilot.*

- (c) *Category III approaches, the Authority may approve the use of a flight control guidance system with automatic capability to touchdown.*

*14 CFR: 121.579, 125.329, 135.93*

#### 8.8.4.6 IFR CRUISING ALTITUDE OR FLIGHT LEVEL IN CONTROLLED AIRSPACE

- (a) Each person operating an aircraft under IFR in level cruising flight in controlled airspace shall maintain the altitude or flight level assigned that aircraft by ATC.
- (b) If the ATC clearance assigns "VFR conditions on-top," each person shall maintain a VFR cruising altitude in VMC.

*Note: The requirements for VFR cruising altitudes are in 8.8.3.4.*

*ICAO Annex 2: 5.2.1; 5.2.2  
14 CFR: 91.179(a)*

### 8.8.4.7 IFR CRUISING ALTITUDE OR FLIGHT LEVEL IN UNCONTROLLED AIRSPACE

- (a) Each person operating an aircraft in level cruising flight under IMC at altitudes above 900 m (3,000 ft) from the ground or water, shall maintain—
  - (1) For magnetic courses from zero degrees to 179 degrees, any odd thousand MSL altitude or flight level, such as 5,000, 7,000, or FL 210; and
  - (2) For magnetic courses from 180 degrees to 359 degrees, any even thousand MSL altitude or flight level, such as 4, 000, 6,000 or FL 220.
- (b) A person may deviate from the cruising altitudes specified in paragraph (a) only when—
  - (1) Authorized by ATC;
  - (2) Operating in a holding pattern; or
  - (3) Maneuvering in turns

*ICAO Annex 2: 3.1.3, 5.3.1  
14 CFR: 91.179(b)*

### 8.8.4.8 IFR RADIO COMMUNICATIONS

- (a) Each PIC of an aircraft operated under IFR in controlled airspace shall have a continuous watch maintained on the appropriate frequency and shall report by radio as soon as possible—
  - (1) The time and altitude of passing each designated reporting point, or the reporting points specified by ATC, except that while the aircraft is under radar control, only the passing of those reporting points specifically requested by ATC need be reported;
  - (2) Any unforecast weather conditions encountered; and
  - (3) Any other information relating to the safety of flight, such as hazardous weather or abnormal radio station indications.

*ICAO Annex 2: 5.2.1, Annex 6, Part II: 12, 4.13.  
14 CFR: 91.183*

### 8.8.4.9 OPERATION UNDER IFR IN CONTROLLED AIRSPACE: MALFUNCTION REPORTS

- (a) The PIC of each aircraft operated in controlled airspace under IFR shall report as soon as practical to ATC any malfunctions of navigational, approach, or communication equipment occurring in flight.
- (b) In each report specified in paragraph (a), the PIC shall include the—
  - (1) Aircraft identification;
  - (2) Equipment affected;
  - (3) Degree to which the capability of the pilot to operate under IFR in the ATC system is impaired; and
  - (4) Nature and extent of assistance desired from ATC.

*14 CFR: 91.187*

### 8.8.4.10 CONTINUATION OF IFR FLIGHT TOWARD A DESTINATION

No pilot may continue an IFR flight toward an aerodrome or heliport of intended landing, unless the latest available meteorological information indicates that the conditions at that aerodrome, or at least

one destination alternate aerodrome will, at the expected time of arrival, be at or above the specified instrument approach minima.

ICAO Annex 6, Part I: 4.3.5.2, 4.4.1.1

ICAO Annex 6, Part II: 4.6.3.1

ICAO Annex 6, Part III, Section II: 2.4.1.1; Annex 6, Part III, Section III: 2.6.3.1

14 CFR: 135.219

#### 8.8.4.11 INSTRUMENT APPROACH PROCEDURES AND IFR LANDING MINIMUMS

No person may make an instrument approach at an aerodrome except in accordance with IFR weather minimums and instrument approach procedures set forth in the AOC holder's operations specifications.

14 CFR: 135.219

#### 8.8.4.12 COMMENCING AN INSTRUMENT APPROACH: COMMERCIAL AIR TRANSPORT

- (a) In commercial air transport operations, no pilot may continue an approach past the final approach fix, or where a final approach fix is not used, begin the final approach segment of an instrument approach procedure, at any aerodrome unless—
  - (1) A source approved by the Authority issues a weather report for that aerodrome; and
  - (2) The latest weather report for that aerodrome reports the visibility to be equal to or more than the minimums prescribed for that procedure.
- (b) If a pilot begins the final approach segment of an instrument approach procedure and subsequently receives a weather report indicating below-minimum conditions, the pilot may continue the approach to DH or MDA.

*Note: For the purpose of this subsection, the final approach segment begins at the final approach fix or facility prescribed in the instrument approach procedure. When a final approach fix is not prescribed for a procedure that includes a procedure turn, the final approach segment begins at the point where the procedure turn is completed and the aircraft is established inbound toward the aerodrome on the final approach course within the distance prescribed in the procedure.*

ICAO Annex 6, Part I: 4.4.1, Part IIIA: 4.1.1

14 CFR: 135.225(a)-(c)

JAR-OPS: 1.400, 1.405

#### 8.8.4.13 INSTRUMENT APPROACHES TO CIVIL AERODROMES

- (a) Each person operating a civil aircraft shall use a standard instrument approach procedure prescribed by the authorities having jurisdiction over the aerodrome, unless otherwise authorized by the Authority.
- (b) Authorized DH or MDA. For the purpose of this section, when the approach procedure being used provides for and requires the use of a 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 PIC.
  - (3) The DH or MDA for which the aircraft is equipped.

ICAO Annex 6, Part I: 4.4.8.2

14 CFR: 91.175(a)&(b)

#### 8.8.4.14 OPERATION BELOW DH OR MDA

- (a) Where a DH or MDA is applicable, no pilot may operate a civil aircraft at any aerodrome or heliport below the authorized MDA, or continue an approach below the 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;
  - (2) For commercial air transport operations, a descent rate will allow touchdown to occur within the touchdown zone of the runway of intended landing;
  - (3) The flight visibility is not less than the visibility prescribed in the standard instrument approach being used; and
  - (4) At least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot—
    - (i) 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.
    - (ii) The threshold;
    - (iii) The threshold markings;
    - (iv) Threshold lights;
    - (v) The runway end identifier lights;
    - (vi) The visual approach slope indicator;
    - (vii) The touchdown zone or touchdown zone markings;
    - (viii) The touchdown zone lights;
    - (ix) The runway or runway markings; or
    - (x) The runway lights.

*Note: These visual references do not apply to Category II and III operations. The required visual references under Category II and III operations are provided in the AOC holder's operations specifications or a special authorization prescribed by the Authority.*

ICAO Annex 6, Part I: 4.4.1.2, Part IIIA: 2.4.1.2  
14 CFR: 91.175(c)

#### 8.8.4.15 LANDING DURING INSTRUMENT METEOROLOGICAL CONDITIONS

No pilot operating a civil aircraft may land that aircraft when the flight visibility is less than the visibility prescribed in the standard instrument approach procedure being used.

14 CFR: 91.175(d)  
ICAO Annex 6, Part II: 4.6.4, Part IIIA 2.4.1.2

#### 8.8.4.16 EXECUTION OF A MISSED APPROACH PROCEDURE

- (a) Each pilot operating a civil aircraft shall immediately execute an appropriate missed approach procedure when either of the following conditions exists:
- (1) Whenever the required visual reference criteria is not met in the following situations:
    - (i) When the aircraft is being operated below MDA; or



- (ii) 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 aerodrome 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 aerodrome results only from a normal bank of the aircraft during the circling approach.

14 CFR: 91.175(e)

#### 8.8.4.17 CHANGE FROM IFR FLIGHT TO VFR FLIGHT

- (a) An pilot electing to change from IFR flight to VFR flight shall notify the appropriate ATC facility specifically that the IFR flight is cancelled and then communicate the changes to be made to his or her current flight plan.
- (b) When a pilot operating under IFR encounters VMC, he or she may not cancel the IFR flight unless it is anticipated, and intended, that the flight will be continued for a reasonable period of time in uninterrupted VMC.

ICAO Annex 2: 5.1.2

#### 8.8.4.18 TWO-WAY RADIO COMMUNICATIONS FAILURE IN IFR

- (a) If two-way radio communication failure occurs in IFR conditions, or if continued flight in VFR is judged not feasible, each pilot shall continue the flight according to the following:
  - (1) Route—
    - (i) By the route assigned in the last ATC clearance received;
    - (ii) If being radar vectored, by the direct route from the point of radio failure to the fix, route, or airway specified in the vector clearance;
    - (iii) In the absence of an assigned route, by the route that ATC has advised may be expected in a further clearance; or
    - (iv) In the absence of an assigned route or a route that ATC has advised may be expected in a further clearance, by the route filed in the flight plan.
  - (2) Altitude. At the highest of the following altitudes or flight levels for the route segment being flown—
    - (i) The altitude or flight level assigned in the last ATC clearance received;
    - (ii) The minimum altitude (converted, if appropriate, to minimum flight level for IFR operations); or
    - (iii) The altitude or flight level ATC advised may be expected in a further clearance.
  - (3) Leave clearance limit.
    - (i) When the clearance limit is at a fix from which an approach begins, commence descent or descent and approach—
      - (A) As close as possible to the expect-further-clearance time if one has been received, or
      - (B) If one has not been received, as close as possible to the ETA as calculated from the filed or amended (with ATC) estimated time en route.

- (ii) If the clearance limit is not a fix from which an approach begins—
  - (A) Leave the clearance limit at the expect-further-clearance time if one has been received, or if none has been received, upon arrival over the clearance limit,
  - (B) Proceed to a fix from which an approach begins, and
  - (C) Commence descent or descent and approach as close as possible to the ETA as calculated from the filed or amended with ATC estimated time en route.

214 CFR: 91.185

## **8.9 PASSENGERS AND PASSENGER HANDLING**

### **8.9.1 ALL PASSENGER CARRYING OPERATIONS**

#### **8.9.1.1 UNACCEPTABLE CONDUCT**

- (a) No person on board may interfere with a crewmember in the performance of his or her duties.
- (b) Each passenger shall fasten his or her seat belt and keep it fastened while the seat belt sign is lighted.
- (c) No person on board an aircraft shall recklessly or negligently act or omit to act in such a manner as to endanger the aircraft or persons and property therein.
- (d) No person may secrete himself or herself nor secrete cargo on board an aircraft.
- (e) No person may smoke while the no-smoking sign is lighted.
- (f) No person may smoke in any airplane lavatory.
- (g) No person may tamper with, disable or destroy any smoke detector installed in any airplane lavatory.  
*JAR-OPS: 1.105(b)*

#### **8.9.1.2 REFUELLING WITH PASSENGERS ON BOARD**

- (a) No PIC may allow an airplane to be refuelled when passengers are embarking, on board or disembarking unless—
  - (1) The aircraft is manned by qualified personnel ready to initiate and direct an evacuation; and
  - (2) Two-way communication is maintained between the qualified personnel in the aircraft and the ground crew supervising the refuelling.
- (b) Helicopters. [RESERVED]

#### **8.9.1.3 PASSENGER SEATS, SAFETY BELTS, AND SHOULDER HARNESSSES**

- (a) The PIC shall ensure that each person on onboard occupies an approved seat or berth with their own individual safety belt and shoulder harness (if installed) properly secured about them during takeoff and landing.
- (b) Each passenger shall have his or her seatbelt securely fastened at any other time the PIC determines it is necessary for safety.

- (c) A safety belt provided for the occupant of a seat may not be used during takeoff and landing by more than one person who has reached his or her second birthday.

*Note: When cabin attendants are required in a commercial air transport operation, the PIC may delegate this responsibility, but shall ascertain that the proper briefing has been conducted before takeoff.*

14 CFR: 121.311(a)-(d), 125.211, 135.128  
JAR-OPS 1: 1.320(b)

#### 8.9.1.4 PASSENGER BRIEFING

- (a) The PIC shall ensure that crewmembers and passengers are made familiar, by means of an oral briefing or by other means, with the location and use of the following items, if appropriate—
- (1) Seat belts;
  - (2) Emergency exits;
  - (3) Life jackets;
  - (4) Oxygen dispensing equipment; and
  - (5) Other emergency equipment provided for individual use, including passenger emergency briefing cards.
- (b) The PIC shall ensure that all persons on board are aware of the locations and general manner of use of the principal emergency equipment carried for collective use.

*Note: For commercial air transport operations, the briefing shall contain all subjects approved by the Authority for the specific operations conducted as included in the pertinent Operations Manual.*

*Note: When cabin crewmembers are required in a commercial air transport operation, the PIC may delegate this responsibility, but shall ascertain that the proper briefing has been conducted before takeoff.*

ICAO Annex 6, Part I: 4.2.11.1 & 2, Part II: 4.3.1, Part III: 2.2.10.1 & 2  
14 CFR: 91, 125.327

#### 8.9.1.5 INFLIGHT EMERGENCY INSTRUCTION

In an emergency during flight, the PIC shall ensure that all persons on board are instructed in such emergency action as may be appropriate to the circumstances.

*Note: When cabin attendants are required in a commercial air transport operation, the PIC may delegate this responsibility, but shall ascertain that the proper briefing has been conducted.*

ICAO Annex 6, Part I: 4.2.11.2, Part IIIA: 2.2.10.3; Part IIIB: 2.11

#### 8.9.1.6 PASSENGER OXYGEN— MINIMUM SUPPLY AND USE

- (a) The PIC shall ensure that breathing oxygen and masks are available to passengers in sufficient quantities for all flights at such altitudes where a lack of oxygen might harmfully affect passengers.
- (b) The PIC shall ensure that the minimum supply of oxygen prescribed by the Authority is on board the aircraft.

*Note: The requirements for oxygen storage and dispensing apparatus are prescribed in Part 7.*

- (c) The PIC shall require all passengers to use oxygen continuously at cabin pressure altitudes above 15,000 feet.

*ICAO Annex 6, Part I: 4.4.5, Part II: 4.9, 4.10,  
14 CFR: 91.211, 121.33(c); 135.89*

### **8.9.1.7 ALCOHOL OR DRUGS**

No person may permit the boarding or serving of any person who appears to be intoxicated or who demonstrates, by manner or physical indications, that that person is under the influence of drugs (except a medical patient under proper care).

*14 CFR: 91.17(b), 121.575 (c)  
JAR-OPS 1: 1.115*

## **8.9.2 COMMERCIAL AIR TRANSPORT PASSENGER CARRYING OPERATIONS**

### **8.9.2.1 PASSENGER COMPLIANCE WITH INSTRUCTIONS**

Each passenger on a commercial air transport flight shall comply with instructions given by a crew member in compliance with this section.

### **8.9.2.2 DENIAL OF TRANSPORTATION**

- (a) An AOC holder may deny transportation because a passenger—
  - (1) Refuses to comply with the instructions regarding exit seating restrictions prescribed by the Authority; or
  - (2) Has a handicap that can be physically accommodated only by an exit row seat.

*14 CFR:135.129*

### **8.9.2.3 CARRIAGE OF PERSONS WITHOUT COMPLIANCE WITH THESE PASSENGER-CARRYING REQUIREMENTS**

- (a) The passenger-carrying requirements of paragraph (b) do not apply when carrying—
  - (1) A crewmember not required for the flight;
  - (2) A representative of the Authority on official duty;
  - (3) A person necessary to the safety or security of cargo or animals; or
  - (4) Any person authorized by the AOC holder's Operations Manual procedures, as approved by the Authority.
- (b) No person may be carried without compliance to the passenger carrying requirements unless—
  - (1) There is an approved seat with an approved seat belt for that person;
  - (2) That seat is located so that the occupant is not in any position to interfere with the flight crewmembers performing their duties;
  - (3) There is unobstructed access from their seat to the flight deck or a regular or emergency exit;
  - (4) There is a means for notifying that person when smoking is prohibited and when seat belts shall be fastened; and

- (5) That person has been orally briefed by a crewmember on the use of emergency equipment and exits.

14 CFR: 121.583, 125.331

#### 8.9.2.4 CABIN ATTENDANT AT DUTY STATIONS [RESERVED]

#### 8.9.2.5 EVACUATION CAPABILITY

The PIC, SCA and other person assigned by the AOC holder shall ensure that, when passengers are on board the aircraft before movement on the surface, at least one floor-level exit provides for egress of passengers through normal or emergency means.

14 CFR: 121.570(b)  
JAR-OPS: 1.315

#### 8.9.2.6 ARMING OF AUTOMATIC EMERGENCY EXITS

No person may cause an aeroplane carrying passengers to be moved on the surface, takeoff or land unless each automatically deployable emergency evacuation assisting means installed on the aircraft is ready for evacuation.

14 CFR: 121.570(a)

#### 8.9.2.7 ACCESSIBILITY OF EMERGENCY EXITS AND EQUIPMENT

No person may allow carry-on baggage or other items to block access to the emergency exits when the aircraft is moving on the surface, during takeoff or landing, or while passengers remain on board.

14 CFR: 121.578

#### 8.9.2.8 STOPS WHERE PASSENGERS REMAIN ONBOARD

- (a) At stops where passengers remain on board the aircraft, the PIC, the co-pilot, or both shall ensure that—
- (1) All engines are shut down;
  - (2) At least one floor level exit remains open to provide for the deplaning of passengers; and
  - (3) There is at least one person immediately available who is qualified in the emergency evacuation of the aircraft and who has been identified to the passengers on board as responsible for the passenger safety.
- (b) If refuelling with passengers on board, the PIC or a designated company representative shall ensure that the AOC holder's Operations Manual procedures are followed.

#### 8.9.2.9 CARRIAGE OF PERSONS WITH REDUCED MOBILITY

- (c) No person may allow a person of reduced mobility to occupy seats where their presence could—
- (1) Impede the crew in their duties;
  - (2) Obstruct access to emergency equipment; or
  - (3) Impede the emergency evacuation of the aircraft.

14 CFR: 121.571(a)(3)  
JAR-OPS: 1.260

### 8.9.2.10 EXIT ROW SEATING

No PIC or SCA may allow passenger to sit in an emergency exit row if the PIC or SCA determine that it is likely that the passenger would be unable to understand and perform the functions necessary to open an exit and to exit rapidly.

See Implement Standard for additional requirements pertaining to exit row seating.

14 FR: 135.129

### 8.9.2.11 PROHIBITION AGAINST CARRIAGE OF WEAPONS

No person may, while on board an aircraft being operated in commercial air transport, carry on or about their person a deadly or dangerous weapon, either concealed or unconcealed.

Note: this section does not apply to officials or employees of the State who are authorized to carry weapons or crew members and other persons authorized by the AOC holder to carry arms.

14 FR: 108.11

### 8.9.2.12 OXYGEN FOR MEDICAL USE BY PASSENGERS

- (a) An AOC holder may allow a passenger to carry and operate equipment for the storage, generation or dispensing of medical oxygen only as prescribed by the Authority.
- (b) No person may smoke, and no crew member may allow any person to smoke within 10 ft of oxygen storage and dispensing equipment carried for the medical use of a passenger.
- (c) No crew member may allow any person to connect or disconnect oxygen dispensing equipment to or from an oxygen cylinder while any other passenger is aboard the aircraft.

14 FR: 121.574

### 8.9.2.13 CARRY-ON BAGGAGE

- (a) No person may allow the boarding of carry-on baggage unless it can be adequately and securely stowed in accordance with the AOC holder's Operations Manual procedures.
- (b) No person may allow aircraft passenger entry doors to be closed in preparation for taxi or pushback unless at least one required crew member has verified that each article of baggage has been properly stowed in overhead racks with approved restraining devices or doors or in approved locations aft of the bulkhead.
- (c) No person may allow carry-on baggage to be stowed in a location that would cause that location to be loaded beyond its maximum placard weight limitation.

Note: The stowage locations shall be capable of restraining the articles in crash impacts severe enough to induce the ultimate inertia forces specified in the emergency landing conditions under which the aircraft was type-certified.

ICAO Annex 6, Part 1: 4.8  
14 CFR: 121.589, 135.87  
JAR OPS 1:1.270 & Appendix 1

**8.9.2.14 CARRIAGE OF CARGO IN PASSENGER COMPARTMENTS**

No person may allow the carriage of cargo in the passenger compartment of an aeroplane except as prescribed by the Authority.

See Implementing Standard for specific requirements pertaining to carriage of cargo in passenger compartments.

14 FR: 135.87

**8.9.2.15 PASSENGER INFORMATION SIGNS**

The PIC shall turn on required passenger information signs during any movement on the surface, for each takeoff and each landing, and when otherwise considered to be necessary.

14 CFR: 121.317(b)

**8.9.2.16 REQUIRED PASSENGER BRIEFINGS**

- (a) No person may commence takeoff unless the passenger are briefed prior to takeoff in accordance with the AOC holder's Operation Manual procedures on-
- (1) Smoking limitations prohibitions;
  - (2) Emergency exit location and use;
  - (3) Use of safety belts;
  - (4) Emergency floatation means location and use;
  - (5) Fire extinguisher location and operation;
  - (6) Placement of seat backs;
  - (7) If flights is above 12, 000 feet MSL, the normal and emergency use of oxygen; and
  - (8) The passenger briefing card.
- (b) Immediately before or immediately after turning the seat belt sign off, the PIC or SCA shall ensure That the passengers are briefed to keep their seat belts fastened while seated; even when the seat belt sign is off.
- (c) Before each takeoff, the PIC or SCA shall ensure that any person of reduced mobility are personally briefed on –
- (1) The route to the most appropriate exit; and
  - (2) The time to begin moving to the exit in event of an emergency.

14 CFR: 121.571(a)  
ICAO Annex 6, Part IIIA: 2.2.10.4

**8.9.2.17 PASSENGER BRIEFING: EXTENDED OVERWATER OPERATIONS**

No person may commence extended overwater operations unless all passengers have been orally briefed on the location and operations of life preservers, life rafts and other flotation means, including a demonstration of the method of donning and inflating a life preserver.

14 FR: 121.573

### 8.9.2.18 PASSENGER SEAT BELTS

- (a) Each passenger occupying a seat or berth shall fasten his or her safety belt and keep it fastened while the “Fasten Seat Belt” sign is lighted or, in aircraft not equipped with such a sign, whenever instructed by the PIC.
- (b) No passenger safety belt may be used by more than one occupant during takeoff and landing.
- (c) At each unoccupied seat, the safety belt and shoulder harness, if installed, shall be secured so as not to interfere with crew members in the performance of their duties or with the rapid degrees of occupants in an emergency.

Note: a person who has not reached his or her second birthday may be held by an adult who is occupying a seat or berth.

Note: a berth, such as a multiple lounge or divan seat, may be occupied by two persons provided it is equipped with an approved safety belt or each person and is used during en route flight only.

*14 CFR: 121.317(f)*

### 8.9.2.19 PASSENGER SEAT BACKS

No PIC or SCA may allow the takeoff or landing of an aircraft unless each passenger seat backs is in the upright position.

Note: exceptions may only be made in accordance with procedures in the AOC holder's Operations Manual provided the seat back does not obstruct any passenger's access to the aisle or to any emergency exit.

*14 CFR: 121; 311(e)  
JAR-OPS:1.325*

### 8.9.2.20 STOWAGE OF FOOD, BEVERAGE AND PASSENGER SERVICE

- (a) No PIC, co-pilot or SCA may allow the movement of an aircraft on the surface, takeoff or land—
  - (1) When any food, beverage or tableware furnished by the AOC holder is located at any passenger seat; and
  - (2) Unless each food and beverage tray and seat back tray table is in the stowed position.

*14 CFR: 121.577, 125.333, 135.122  
JAR-OPS: 1.325*

### 8.9.2.21 SECURING OF ITEMS OF MASS IN PASSENGER COMPARTMENT

- (a) No person may allow the takeoff or landing of an aircraft unless each item of mass in the passenger cabin is properly secured to prevent it from becoming a hazard during taxi, takeoff and landing and during turbulent weather conditions.



- (b) No person may allow an aircraft to move on the surface, takeoff or land unless each passenger serving cart is secured in its stowed position.

14 CFR: 121.576, 577  
JAR-OPS: 1.325

## 8.10 CREWMEMBER AND FLIGHT OPERATIONS OFFICER QUALIFICATIONS: COMMERCIAL AIR TRANSPORT

### 8.10.1.1 AGE 60 RESTRICTION

- (a) No person may serve nor may any AOC holder use a person as a required PIC in single pilot operations on aircraft engaged in commercial air transport operations if that person has reached his or her 60th birthday.
- (b) Check airmen who have reached their 65th birthday or who do not hold an appropriate medical certificate may continue their check airman functions, but may not serve as or occupy the position of a required pilot flight crew member on an airplane engaged in international commercial air transport operations.

ICAO Annex 1: 2.1.10  
14 FR: 121.383(c)

### 8.10.1.2 PIC LICENSE REQUIREMENTS: TURBOJET, TURBOFAN, OR LARGE AIRCRAFT

No pilot may act as PIC of a turbojet, turboprop, or large aircraft in commercial air transportation operations unless he or she holds an ATP license and a type rating for that aircraft.

ICAO Annex 1: 2.4.2.1; 2.5.2; 2.6.2.1; 2.8.2.1; 2.9.2; 2.10.2

### 8.10.1.3 PIC LICENSE REQUIREMENTS: NON TURBOJET OR TURBOFAN SMALL AEROPLANES

- (a) No pilot may act as a PIC of a non-turbojet or turboprop small aircraft in commercial air transport during—
  - (1) IFR operations unless he or she holds a commercial pilot license with appropriate category and class ratings for the aircraft operated, and an instrument rating and meets the experience requirements for the operation, or
  - (2) Day VFR operations unless he or she holds a commercial pilot license with appropriate category and class ratings for the aircraft operated.

ICAO Annex 1: 2.4.2.1; 2.5.2; 2.6.2.1; 2.8.2.1; 2.9.2; 2.10.2  
14 CFR: 135.245

### 8.10.1.4 PIC AERONAUTICAL EXPERIENCE: SMALL AEROPLANES

- (a) No pilot may act as PIC of a small airplane in commercial air transport during—
  - (1) IFR operations unless he or she meets the minimum aeronautical experience requirements necessary to qualify for the ATP license, or

- (2) VPR operations unless he or she has logged a minimum of 500 hours of time as a pilot, including at least 100 hours of cross-country flight during 25 hours of which were at night.

ICAO Annex 1: 3.3.2.1  
ICAO Annex 6, Part I: 9.1.3  
JAR-OPS: 1.940(a)(6)

### 8.10.1.5 SIC LICENSE REQUIREMENTS

- (a) No pilot may act as SIC of an aircraft in commercial air transport operations unless he or she—

- (1) Holds a commercial pilot license with appropriate category and class ratings for the aircraft operated; and
- (2) Holds an instrument rating.

14 CFR: 121.385(d)

### 8.10.1.6 FE LICENSE REQUIREMENTS [RESERVED]

### 8.10.1.7 ONE PILOT QUALIFIED TO PERFORM FE FUNCTIONS [RESERVED]

### 8.10.1.8 PERSONS QUALIFIED TO FLIGHT RELEASE

No person may act as a flight operations officer in releasing a scheduled passenger-carrying commercial air transport operation unless that person—

- (1) Holds a flight operations officer license or an Airline Transport Pilot license; and
- (2) Is currently qualified with the AOC holder for the operation and type of aircraft used.

ICAO Annex 1: 4.5.2  
ICAO Annex 6, Part I: 10.1  
ICAO Annex 6, Part III, Section II: 8.1  
14 CFR: 121.533; 121.535

### 8.10.1.9 COMPANY PROCEDURES INDOCTRINATION

No person may serve nor may any AOC holder use a person as a crewmember or flight operations officer/flight dispatcher unless that person has completed the company procedures indoctrination curriculum approved by the Authority, which shall include a complete review of the applicable regulations and Operations Manual procedures pertinent to the crewmember or flight operation officer's duties.

*See Implementing Standards for knowledge area and program hour requirements.*

ICAO Annex 6, Part I: 4.2.2.1; 10.2(b); 10.3R  
ICAO Annex 6, Part III, Section II: 2.2.2.1; 8.2(b); 8.3R  
ICAO Doc 9376, Preparation of an Operations Manual, para. 2.2.4  
14 CFR: 121.415(a)

**8.10.1.10 INITIAL DANGEROUS GOODS TRAINING [RESERVED]****8.10.1.11 INITIAL SECURITY TRAINING [RESERVED]****8.10.1.12 INITIAL CREW RESOURCE MANAGEMENT**

No person may serve nor may any AOC holder use a person as a flight operations officer or crewmember unless that person has completed the initial CRM curriculum approved by the Authority.

*See Implementing Standards for course curriculum topics.*

*ICAO Annex 6, Part I: 9.3.1  
ICAO Annex 6, Part III, Section II: 7.3.1  
ICAO Doc 9376, Preparation of an Operations Manual, para. 4.17.2-4.17.4, Chapter 4 Attachment K  
14 CFR: 121.404  
JAR OPS: 1.943*

**8.10.1.13 INITIAL EMERGENCY EQUIPMENT DRILLS [RESERVED]****8.10.1.14 INITIAL AIRCRAFT GROUND TRAINING**

- (a) No person may serve nor may any AOC holder use a person as a crewmember or flight operations officer unless he or she has completed the initial ground training approved by the Authority for the aircraft type.
- (b) Initial aircraft ground training for flight crewmembers shall include the pertinent portions of the Operations Manual relating to aircraft-specific performance, mass and balance, operational policies, systems, limitations, normal, abnormal and emergency procedures on the aircraft type to be used.

*Specific course curriculum requirements for flight crewmembers are contained in Implementing Standards.*

*Note: The AOC holder may have separate initial aircraft ground training curricula of varying lengths and subject emphasis, which recognize the experience levels of flight crewmembers, approved by the Authority.*

- (c) For cabin crewmembers, initial aircraft ground training shall include the pertinent portions of the Operations Manual relating to aircraft-specific configuration, equipment, normal and emergency procedures for the aircraft types within the fleet.

*Specific course curriculum requirements for cabin crewmembers are contained in the Implementing Standards.*

- (d) For flight operations officers, aircraft initial ground training shall include the pertinent portions of the Operations Manual relating to aircraft-specific flight preparation procedures, performance, mass and balance, systems, limitations for the aircraft types within the fleet.

*Specific course curriculum requirements for flight operations officers are contained in the Implementing Standards.*

*ICAO Annex 6, Part I: 9.3.1; 10.2(b)R; 12.4  
ICAO Annex 6, Part III, Section II: 7.3.1; 8.2(b)R; 10.3*

ICAO Doc 9376, Preparation of an Operations Manual, para. 4.2.2 and attachment B; para. 4.15; para. 4.16  
14 CFR: 121.419, 121.421, 121.422, 121.437(a), 121.463

#### 8.10.1.15 INITIAL AIRCRAFT FLIGHT TRAINING [RESERVED]

#### 8.10.1.16 INITIAL SPECIALIZED OPERATIONS TRAINING

- (a) No person may serve nor may any AOC holder use a person as a flight crewmember unless he or she has completed the appropriate initial specialized operations training curriculum approved by the Authority.
- (b) Specialized operations for which initial training curricula shall be developed include—
  - (1) Low minimums operations, including low visibility takeoffs and Category II and III operations;
  - (2) Extended range operations;
  - (3) Specialized navigation;
  - (4) PIC right seat qualification;

See IS: 8.10.1.16 for specific initial specialized operations training curriculum.

ICAO Doc 9376, Preparation of an Operations Manual, para. 4.5 and Attachment L

#### 8.10.1.17 AIRCRAFT DIFFERENCES

No person may serve nor may any AOC holder use a person as a flight operations officer or crewmember on an aircraft of a type for which a differences curriculum is included in the AOC holder's approved training programme, unless that person has satisfactorily completed that curriculum, with respect to both the crewmember position and the particular variant of that aircraft.

See IS: 8.10.1.17 for a general listing of subjects to be covered in aircraft differences training.

ICAO Annex 6, Part I: 9.3.1  
ICAO Annex Part III, Section III: 7.3.1  
ICAO Doc 9376, Preparation of an Operations Manual, para. 4.2  
14 CFR: 121.418, 121.433(b)  
JAR-OPS 1: 1.950

#### 8.10.1.18 USE OF SIMULATORS

- (a) Each airplane simulator and other training device that is used for flight crew member qualification shall—
  - (1) Be specified approved by the authority for—
    - (i) The AOC holder;
    - (ii) The type airplane, including type variations, for which the training or check is being conducted;
    - (iii) The particular maneuver, procedure, or crew member function involved;
  - (2) Maintain the performance, functional, and other characteristics that are required for approval;
  - (3) Be modified to conform with any notification to the airplane being simulated that results in changes to performance, functional, or other characteristics required for approval;

- (4) Be given a daily functional pre-flight check before use; and
- (5) Have a daily discrepancy log kept by the appropriate instructor or check airman at the end of each training or check flight.

### 8.10.1.19 INTRODUCTION OF NEW EQUIPMENT OR PROCEDURES

No person may serve nor may any AOC holder use a person as a flight crewmember when that service would require expertise in the use of new equipment or procedures for which a curriculum is included in the AOC holder's approved training programme, unless that person has satisfactorily completed that curriculum, with respect to both the crewmember position and the particular variant of that aircraft.

### 8.10.1.20 AIRCRAFT AND INSTRUMENT PROFICIENCY CHECKS

- (a) No person may serve nor may any AOC holder use a person as a pilot flight crewmember unless, since the beginning of the 12th calendar month before that service, that person has passed the proficiency check prescribed by Authority in the make, and model aircraft on which their services are required.
- (b) No person may serve nor may any AOC holder use a person as a pilot in IFR operations unless, since the beginning of the 6th calendar month before that service, that pilot has passed the instrument competency check prescribed by the Authority.
- (c) A pilot may complete the requirements of paragraphs (a) and (b) simultaneously in a specific aircraft type.

See IS: 8.10.1.20 for specific operation and procedures pertaining to the proficiency checks.

*ICAO Annex 6, Part I: 9.4.4.1; 9.4.4.2*  
*ICAO Annex 6, Part III, Section II: 7.4.4.1; 7.4.4.2*  
*ICAO Doc 9376, Preparation of an Operations Manual, para. 4.3 and 4.4 and Attachment D*  
*14 CFR: 121.441; 125.287; 121.291*  
*JAR-OPS: 1.965(b)*

### 8.10.1.21 RE-ESTABLISHING REGENCY OF EXPERIENCE— FLIGHTCREW

- (1) In addition to meeting all applicable training and checking requirements, a required pilot flight crewmember who, in the preceding 90 days has not made at least three takeoffs and landings in the aircraft in which that person is to serve, shall, under the supervision of a check airman, re-establish recency of experience as follows:
  - (1) Make at least three takeoffs and landings in the aircraft in which that person is to serve or in a qualified simulator.
  - (2) Make at least one takeoff with a simulated failure of the most critical powerplant, one landing from the minimum ILS authorized for the AOC holder, and one landing to a full stop.
  - (2) When using a simulator to accomplish any of the takeoff and landing training requirements necessary to re-establish recency of experience, each required flight crewmember position shall be occupied by an appropriately qualified person and the simulator shall be operated as if in a normal in-flight environment without use of the repositioning features of the simulator.
  - (3) A check airman who observes the takeoffs and landings of a pilot flight crewmember shall certify that the person being observed is proficient and qualified to perform flight duty in operations and may require any additional maneuvers that are determined necessary to make this certifying statement.

ICAO Annex 6, Part I: 9.4.1.1; 9.4.1.2  
ICAO Annex 6, Part III, Section II: 7.4.1.1; 7.4.1.2  
14 CFR: 121.439(b)  
JAR-OPS 1.970

### 8.10.1.22 PAIRING OF LOW EXPERIENCE CREWMEMBERS

- (a) If a SIC has fewer than 100 hours of flight time in the type airplane being flown in commercial air transport, and the PIC is not an appropriately qualified check airman, the PIC shall make all takeoffs and landings in situations designated as critical by the Authority in IS: 8.10.1.22.
- (b) No PIC or CP may conduct operations for a type airplane in commercial air transport unless either pilot has at least 75 hours of line operating flight time, either as PIC or CP.
- (c) The Authority may, upon application by the AOC holder, authorize an exemption for the reduction of the number of hours from paragraph (b) by an appropriate amendment to the operations specifications in any of the circumstances identified in IS: 8.10.1.22.

See Implementing Standards for those situations designated as critical by the Authority and for circumstances authorizing a deviation from paragraph (b).

14 CFR: 121.438  
JAR-OPS 1.940(a)(4)

### 8.10.1.23 FLIGHT ENGINEER AND FLIGHT NAVIGATOR PROFICIENCY CHECKS [RESERVED]

### 8.10.1.24 COMPETENCE CHECKS— CABIN ATTENDANTS [RESERVED]

### 8.10.1.25 COMPETENCE CHECKS— FLIGHT OPERATIONS OFFICERS

No person may serve nor may any AOC holder use a person as a flight operations officer unless, since the beginning of the 12th calendar month before that service, that person has passed the competency check, prescribed by the Authority for the skill test in Part 2, performing the flight preparation and subsequent duties appropriate to that person's assignment.

See Implementing Standards for specific procedures used in flight operation officer competence checks.

ICAO Annex 6, Part I: 10.2(b)R; 10.2(c)R  
ICAO Annex 6, Part III, Section II: 8.2(b)R; 8.2(c)R  
14 CFR: 121.422(b); 121.427

### 8.10.1.26 SUPERVISED LINE FLYING— PILOTS

- (a) Each pilot initially qualifying as PIC shall complete a minimum of 10 flights performing the duties of a PIC under the supervision of a check airman.
- (b) Each PIC transitioning to a new aircraft type shall complete a minimum of 5 flights performing the duties of a PIC under the supervision of a check airman.
- (c) Each pilot qualifying for duties other than PIC shall complete a minimum of 5 flights performing those duties under the supervision of a check airman.

- (d) During the time that a qualifying PIC is acquiring operating experience, a check airman who is also serving as the PIC shall occupy a pilot station.
- (e) In the case of a transitioning PIC, the check airman serving as PIC may occupy the observer's seat if the transitioning pilot has made at least two takeoffs and landings in the type airplane used, and has satisfactorily demonstrated to the check pilot that he or she is qualified to perform the duties of a PIC for that type of airplane.

*ICAO Doc 9376, Preparation of an Operations Manual, para. 4.11*  
 14 CFR: 121.434(c)(1)(i)-(ii), (2)  
 JAR-OPS 1.955(b)(4)(5)  
 JAR OPS 3.945(a)(5); 3.955

#### **8.10.1.27 SUPERVISED LINE FLYING—FLIGHT ENGINEERS [RESERVED]**

#### **8.10.1.28 SUPERVISED LINE EXPERIENCE— CABIN ATTENDANTS [RESERVED]**

#### **8.10.1.29 LINE OBSERVATIONS— FLIGHT OPERATIONS OFFICERS**

No person may serve nor may any AOC holder use a person as a flight operations officer unless, since the beginning of the 12th calendar month before that service, that person has observed, on the flight deck, the conduct of two complete flights, comprising at least five total hours, over routes representative of those for which that person is assigned duties.

*ICAO Annex 6, Part I: 10.2(a)R; 10.3R*  
*ICAO Annex 6, Part III, Section II: 8.3R*  
 14 CFR: 121.463

#### **8.10.1.30 ROUTE AND AREA CHECKS— PILOT QUALIFICATION**

- (a) No person may serve nor may any AOC holder use a person as a pilot unless, within the preceding 12 calendar-months, that person has passed a route check in which he or she satisfactorily performed his or her assigned duties in one of the types of airplanes he or she is to fly.
- (b) No person may perform PIC duties over a designated special operational area that requires a special navigation system or procedures or in ETOPS operations unless his or her competency with the system and procedures has been demonstrated to the AOC holder within the past 12 calendar-months.
- (c) Each PIC shall demonstrate operational competency by navigation over the route or area to be flown and the aerodromes to be used as PIC under the supervision of a check airman and, on a continuing basis, by flights performing PIC duties.

*ICAO Annex 6, Part I: 4.7.2(c); 9.4.3.1, 9.4.3.2, 9.4.3.5*  
*ICAO Annex 6, Part III, Section II: 7.4.3.1, 7.4.3.2, 7.4.3.5*  
*ICAO Doc 9376, Preparation of an Operations Manual, para. 4.6.1*  
 14 CFR: 121.440, 121.443  
 JAR-OPS 1.975; JAR OPS 3.975

#### **8.10.1.31 PIC LOW MINIMUMS AUTHORIZATION**

- (a) Until a PIC has 15 flights performing PIC duties in the aircraft type (which included 5 approaches to landing using Category I or II procedures), he or she may not plan for or initiate an instrument approach when the DH or MDA is less than 300 ft and the visibility less than 1 statute mile.

- (b) Until a PIC has 20 flights performing PIC duties in the aircraft type (which included 5 approach and landing using Category III procedures), he or she may not plan for or initiate an approach when the DH or MDA is less than 100 ft or the visibility is less than 1200 ft RVR.

*ICAO Annex 6, Part I: 4.2.7.2(b)*  
*ICAO Annex 6, Part III, Section II: 2.2.7.2(b)*  
*14 CFR: 121.652; 135.225(e)*

#### **8.10.1.32 DESIGNATED SPECIAL AERODROMES AND HELIPORTS—PIC QUALIFICATION**

- (a) No person may serve nor may any AOC holder use a person as PIC for operations at designated special aerodromes and heliports unless within the preceding 12 calendar-months—
  - (1) The PIC has been qualified by the AOC holder through a pictorial means acceptable to the authority for that aerodrome; or
  - (2) The PIC or the assigned CP has made a takeoff and landing at that aerodrome while serving as a flight crewmember for the AOC holder.
- (b) Designated special aerodrome and heliport limitations are not applicable if the operation will occur—
  - (1) During daylight hours;
  - (2) When the visibility is at least 3 miles; and
  - (3) When the ceiling at that aerodrome is at least 1000 ft above the lowest initial approach altitude prescribed for an instrument approach procedure.

*ICAO Annex 6, Part I: 9.4.3.1, 9.4.3.3; 9.4.3.6*  
*ICAO Annex 6, Part III, Section II: 7.4.3.1, 7.4.3.3; 7.4.3.6*  
*14 CFR: 121.445*

#### **8.10.1.33 RECURRENT TRAINING— FLIGHT CREWMEMBERS [RESERVED]**

#### **8.10.1.34 RECURRENT TRAINING—CABIN ATTENDANTS [RESERVED]**

#### **8.10.1.35 RECURRENT TRAINING— FLIGHT OPERATIONS OFFICERS**

- (a) No person may serve nor may any AOC holder use a person as a flight operations officer unless within the preceding 12 calendar-months that person has completed the recurrent ground curricula approved by the Authority.
- (b) The recurrent ground training shall include training on—
  - (1) Aircraft- special flight operation;
  - (2) Crew resource management; and
  - (3) Recognition of transportation of dangerous goods.

See Implementing Standards for specific program training requirements for flight operations officers.

*ICAO Annex 6, Part I: 10.3 R, 10.4 R*  
*ICAO Annex 6, Part III, Section II: 8.3 R, 8.4 R*  
*ICAO Doc 9376, Preparation of an Operations Manual, para. 4.16*  
*14 CFR: 121.427, FAA AC 121-32*



**8.10.1.36 CHECK AIRMAN TRAINING**

No person may serve nor may any AOC holder use a person as a check airman unless he or she has completed the curricula approved by the authority for those functions for which they are to serve.

See Implementing Standards for specific program training program requirements for check airmen.

**8.10.1.37 FLIGHT INSTRUCTOR TRAINING [RESERVED]****8.10.1.38 FLIGHT INSTRUCTOR QUALIFICATION [RESERVED]****8.10.1.39 CHECK AIRMAN PILOT QUALIFICATIONS**

- (a) No AOC holder may use a person, nor may any person serve as a check airman in an established training programme unless, with respect to the aircraft type involved, that person—
  - (1) Holds the airman licenses and ratings required to serve as a PIC, a flight engineer, or a flight navigator, as applicable;
  - (2) Has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training and differences training, that are required to serve as a PIC, flight engineer, or flight navigator, as applicable;
  - (3) Has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC, flight engineer, or flight navigator, as applicable;
  - (4) Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check;
  - (5) Holds the appropriate medical certificate if serving as a required flight crewmember; and
  - (6) Has been approved by the Authority for the check airman duties involved.

14 CFR: 121.411(b)(c)  
14 CFR: 121.411(f)

**8.10.1.40 CHECK AIRMAN DESIGNATION**

- (a) No person may serve nor may any AOC holder use a person as a check airman for any flight check unless that person has been designated by name and approved function by the Authority within the preceding 12 calendar months

14 CFR: 121.411

**8.10.1.41 CHECK AIRMAN LIMITATIONS**

- (a) No person may serve nor may any AOC holder use a person as a check airman for any check—
  - (1) In an aircraft as a required pilot flight crew member unless that person holds the required airman licenses and ratings and has completed for the AOC holder all applicable training, qualification and currency requirements of this part applicable to the crew position and the flight operations being checked;

- (2) In an aircraft as an observer check airman unless that person holds the airman licenses and ratings and has completed all applicable training, qualification and line observation requirements of this Part applicable to the position and the flight operations being checked; or
- (3) In a simulator unless that person has completed or observed with the AOC holder all training, qualification and line observation requirements of this Part applicable to the position and flight operations being checked.

14 CFR: 121.411

#### **8.10.1.42 SUBSTITUTION OF SIMULATOR EXPERIENCE**

- (a) No AOC holder may use a simulator for training or checking unless that simulator has been specifically approved for the AOC holder in writing by the Authority.
- (b) No AOC holder may use a simulator for any purpose other than that specified in the Authority's approval.

#### **8.10.1.43 LINE QUALIFICATION: CHECK AIRMAN AND INSTRUCTOR**

- (a) No person may serve nor any AOC holder use a person as a check airman or simulator instructor unless, since the beginning of the 12<sup>th</sup> calendar month before that service, that person has—
  - (1) Flown at least 5 flights as a required crew member for the type of aircraft involved; or
  - (2) Observed, on the flight deck, the conduct of 2 complete flights in the aircraft type to which the person is assigned.

#### **8.10.1.44 TERMINATION OF A PROFICIENCY, COMPETENCE OR LINE CHECK**

- (a) If it is necessary to terminate a check for any reason, the AOC holder may not use the crewmember or flight operations officer in commercial air transport operations until the completion of a satisfactory recheck.

#### **8.10.1.45 RECORDING OF CREWMEMBER QUALIFICATIONS**

- (a) The AOC holder shall record in its records maintained for each crewmember and flight operations officer, the completion of each of the qualifications required by this Part.
- (b) A pilot may complete the curricula required by this Part concurrently or intermixed with other required curricula, but completion of each of these curricula shall be recorded separately.

*ICAO Annex 6, Part I: 9.4.3.4  
ICAO Anenx 6, Part III, Section II: 7.4.3.4  
JAR-OPS 1.985; JAR OPS 3.985*

#### **8.10.1.46 MONITORING OF TRAINING AND CHECKING ACTIVITIES**

- (a) To enable adequate supervision of its training and checking activities, the AOC holder shall forward to the Authority at least 24 hours before the scheduled activity the dates, report times and report location of all—
  - (1) Training for which a curriculum is approved in the AOC holder's training programme; and
  - (2) Proficiency, competence and line checks.
- (b) Failure to provide the information required by paragraph (a) may invalidate the training or check and the Authority may require that it be repeated for observation purposes.

**8.10.1.47 ELIGIBILITY PERIOD**

- (a) Crewmembers who are required to take a proficiency check, a test or competency check, or recurrent training to maintain qualification for commercial air transport operations may complete those requirements at any time during the eligibility period.
- (b) The eligibility period is defined as the three calendar month period including the month-prior, the month-due, and the month-after any due date specified by this subsection.
- (c) Completion of the requirement at any time during the period shall be considered as completed in the month-due for calculation of the next due date.

*ICAO Annex 6, Part I: 9.3.2(b); 9.4.4  
ICAO Annex 6, Part III, Section II: 7.3.2(b); 7.4.4  
14 CFR: 125.293; 135.301  
JAR-OPS 1.965(b)(2); JAR-OPS 3.965(b)(2)*

**8.10.1.48 REDUCTIONS IN REQUIREMENTS**

- (a) The Authority may authorize reductions in, or waive, certain portions of the training requirements of this subpart, taking into account the previous experience of the crewmembers.
- (b) Any AOC holder request for reduction or waiver shall be made in writing and outline the basis under which the request is made.
- (c) If the request was for a specific crewmember, the correspondence from the Authority authorizing the reduction and the basis for it shall be filed in the record the AOC holder maintains for that crewmember.
- (d) A person who progresses successfully through flight training, is recommended by their instructor or a check airman, and successfully completes the appropriate flight check for a check airman, or is permitted by the Authority, to complete a course in less than programmed time, need not complete the programmed hours of flight training for the particular aircraft.

Note: Whenever the Authority finds that 20 percent of the flight checks given at a particular training base during the previous 6 months are unsuccessful, this method of approval will not be used by the AOC holder at that base until the Authority finds that the effectiveness of the flight training there has improved.

*14 CFR: 121.401(e); 121.405*

**8.11 REST PERIODS, DUTY, AND FLIGHT TIME: COMMERCIAL AIR TRANSPORT****8.11.1.1 APPLICABILITY**

This section is applicable to the rest, duty and flight time limitations of crewmembers and flight operations officers/flight dispatchers engaged in commercial air transport flight operations.

*ICAO Annex 6, Part I: 9.6, 12.5  
ICAO Annex 6, Part III, Section II: 7.6, 10.4  
14 CFR: 121.470, 135.261*

### 8.11.1.2 COMPLIANCE WITH SCHEDULING REQUIREMENTS

- (a) The authority will consider a person in compliance with prescribed standards of her or she exceeds the prescribed flight duty limitations when—
  - (1) The flight is scheduled and normally terminates within the prescribed limitations; but
  - (2) Due to circumstances beyond the control of the AOC holder (such as adverse weather conditions) are not expected at the time of departure to reach the destination within the scheduled time.
- (b) The authority will consider a person in compliance with prescribed duty limitations, if he or she exceeds those limitations during an emergency or adverse situation beyond the control of the AOC holder.

### 8.11.1.3 DUTY AND REST PERIODS [RESERVED]

### 8.11.1.4 DUTY ALOFT [RESERVED]

### 8.11.1.5 MAXIMUM NUMBER OF FLIGHT TIME HOURS [RESERVED]

### 8.11.1.6 SPECIAL FLIGHT DUTY SCHEMES [RESERVED]

## 8.12 FLIGHT RELEASE— COMMERCIAL AIR TRANSPORT

### 8.12.1 APPLICABILITY

This Subpart is applicable to an AOC holder and the person designated by the AOC holder to issue a flight release.

### 8.12.1.2 QUALIFIED PERSONS REQUIRED FOR OPERATIONAL CONTROL FUNCTIONS

- (a) A qualified person shall be designated by the AOC holder to exercise the functions and responsibilities for operational control of each flight in commercial air transport.
- (b) For passenger-carrying flights conducted on a published schedule, a licensed and qualified flight operations officer shall be on-duty at an operations base to perform the operational control functions.
- (c) For all other flights, the Director of Operations and the PIC are the qualified persons exercising operational control responsibilities, and shall be available for consultation before, during and immediately following the flight operation.
- (d) For all flights, the PIC shares in the responsibility for operational control of the aircraft and has the situational authority to make decisions regarding operational control issues in-flight.
  - (1) Where a decision of the PIC differs from that recommended, the person making the recommendation shall make a record of the associated facts.

*ICAO Annex 6, Part I: 3.1.3; 4.2.1.3  
ICAO Annex 6, Part III, Section II: 1.1.4; 2.2.1.3  
14 CFR: 121.533; 121.535; 121.537*

### 8.12.1.3 FUNCTIONS ASSOCIATED WITH OPERATIONAL CONTROL

- (a) The person exercising responsibility for operational control for an AOC holder shall—
  - (1) Authorize the specific flight operation;

- (2) Ensure that an airworthy aircraft properly equipped for the flight is available;
- (3) Ensure that qualified personnel and adequate facilities are available to support and conduct the flight;
- (4) Ensure that proper flight planning and preparation is made;
- (5) Ensure that flight locating and flight following procedures are followed;
- (6) For all flights, ensure the monitoring of the progress of the flight and the provision of information that may be necessary to safety.

*ICAO Annex 6, Part I: 3.1.3; 4.2.1.3; 4.2.1.4*  
*ICAO Annex 6, Part III, Section II: 1.1.4; 2.2.1.3; 2.2.1.4*  
*14 CFR: 121.533(c); 121.535(c); 121.537(c)*  
*FAA Order 8400.10, Vol.3, Chapter 6, Section 1, para. 1145. C*

#### **8.12.1.4 OPERATIONAL CONTROL DUTIES**

- (a) For passenger-carrying flights conducted on a published schedule, the qualified person performing the duties of a flight operations officer shall—
  - (1) Assist the PIC in flight preparation and provide the relevant information required;
  - (2) Assist the PIC in preparing the operational and ATC flight plans;
  - (3) Sign the dispatch copy of the flight release;
  - (4) Furnish the PIC while in flight, by appropriate means, with information which may be necessary for the safe conduct of the flight; and
  - (5) In the event of an emergency, initiate the applicable procedures contained in the AOC holder's operations manual.
- (b) A qualified person performing the operational control duties shall avoid taking any action that would conflict with the procedures established by—
  - (1) ATC;
  - (2) The meteorological service;
  - (3) The communications service; or
  - (4) AOC holder.

*ICAO Annex 6, Part I: 4.6.1, 4.6.2*  
*ICAO Annex 6, Part III, Section II: 2.6.1, 2.6.2*  
*14 CFR: 121.601*

#### **8.12.1.5 CONTENTS OF A FLIGHT RELEASE/OPERATIONAL FLIGHT PLAN**

- (a) The dispatch or flight release/operational flight plan shall contain or have attached at least the following information concerning each flight:
  - (1) Company or organization name.

- (2) Make, model, and registration number of the aircraft being used.
- (3) Flight or trip number, and date of flight.
- (4) Name of each flight crewmember, cabin crewmember, and PIC.
- (5) Departure aerodrome, destination aerodromes, alternate aerodromes, and route.
- (6) Minimum fuel supply (in gallons or pounds).
- (7) A statement of the type of operation (e.g., IFR, VFR).
- (8) The latest available weather reports, and forecasts for the destination aerodrome and alternate aerodromes.
- (9) Any additional available weather information that the PIC considers necessary.

*ICAO Annex 6, Part I: 4.3.1; 4.3.3.1; 4.3.3.2  
ICAO Annex 6, Part III, Section II: 2.3.1; 2.3.3.1; 2.3.3.2  
14 CFR: 121.687; 121.689(a)(1-7)(b)*

#### **8.12.1.6 FLIGHT RELEASE— AIRCRAFT REQUIREMENTS**

- (a) No person may issue a flight release for a commercial air transport operation unless the aircraft is airworthy and properly equipped for the intended flight operation.
- (b) No person may issue a flight release for a commercial air transport operation using an aircraft with inoperative instruments and equipment installed, except as specified in the MEL approved for the AOC holder for that type aircraft.

*ICAO Annex 6, Part I: 4.3.1  
ICAO Annex 6, Part III, Section II: 2.3.1  
14 CFR: 121.631*

#### **8.12.1.7 FLIGHT RELEASE—FACILITIES AND NOTAMS**

- (a) No person may release an aircraft over any route or route segment unless there are adequate communications and navigational facilities in satisfactory operating condition as necessary to conduct the flight safely.
- (b) The flight operations officer shall ensure that the PIC is provided all available current reports or information on aerodrome conditions and irregularities of navigation facilities that may affect the safety of the flight.

*Note: For his or her review of the operational flight plan, the PIC will be provided with all available NOTAMs with respect to the routing, facilities and aerodromes.*

*ICAO Annex 6, Part I: 4.1.1  
ICAO Annex 6, Part III, Section II: 2.1.1  
14 CFR: 121.601(a); 121.603(a)*

#### **8.12.1.8 WEATHER REPORTS AND FORECASTS**

- (a) No person may release a flight unless he or she is thoroughly familiar with reported and forecast weather conditions on the route to be flown.
- (b) No person may release a flight unless he or she has communicated all information and reservations they may have regarding weather reports and forecasts to the PIC.

**8.12.1.9 FLIGHT RELEASE IN ICING CONDITIONS [RESERVED]****8.12.1.10 FLIGHT RELEASE—UNDER VFR OR IFR**

No person may release a flight under VFR or IFR unless the weather reports and forecasts indicated that the flight can reasonably be expected to be completed as specified in the release.

14 CFR: 121.611, 121.613

**8.12.1.11 FLIGHT RELEASE— MINIMUM FUEL SUPPLY**

No person may issue a flight release for a commercial air transport operation unless the fuel supply specified in the release is equivalent to or greater than the minimum flight planning requirements of this Part, including anticipated contingencies.

**8.12.1.12 FLIGHT RELEASE—AIRCRAFT LOADING AND PERFORMANCE**

- (c) No person may issue a flight release unless he or she is familiar with the anticipated loading of the aircraft and is reasonably certain that the proposed operation will not exceed the—
- (1) Centre of gravity limits;
  - (2) Aircraft operating limitations; and
  - (3) Minimum performance requirements.

ICAO Annex 6, Part I: 4.3.1(d)(e); 5.1.1; 5.2.3  
 ICAO Annex 6, Part III, Section II: 2.3.1(d)(e); 3.1.1; 3.2.3  
 14 CFR: 121.663; 121.665; 121.693  
 FAA AC 120-27

**8.12.1.13 FLIGHT RELEASE—AMENDMENT OR RE-RELEASE EN ROUTE**

- (d) Each person who amends a flight release while the flight is en route shall record that amendment.
- (e) No person may amend the original flight release to change the destination or alternate aerodrome while the aircraft is en route unless the flight preparation requirements for routing, aerodrome selection and minimum fuel supply are met at the time of amendment or re-release.
- (f) No person may allow a flight to continue to an aerodrome to which it has been released if the weather reports and forecasts indicate changes that would render that aerodrome unsuitable for the original flight release.

ICAO Annex 6, Part I: 4.3.6.4 (Note), 4.4.1.1  
 ICAO Annex 6, Part III, Section II: 2.3.6.4 (Note); 2.4.1.1  
 14 CFR: 121.631

**8.12.1.14 FLIGHT RELEASE WITH AIRBORNE WEATHER RADAR EQUIPMENT**

No person may release a large aircraft carrying passengers under IFR or night VFR conditions when current weather reports indicate that thunderstorms, or other potentially hazardous weather conditions that can be detected with airborne weather radar, may reasonably be expected along the route to be flown, unless the airborne weather radar equipment is in satisfactory operating condition.

ICAO Annex 6, Part IIIA: R4.12

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