

**GUIDANCE MATERIAL TO THE**

**CONTENTS OF AN OPERATIONS MANUAL**  
**(AEROPLANE)**

*(as described in CAR Section 2, Series 'O', Part X)*

An Aeroplane Operator shall organize the Operations manual as per the content layout given below **not later than 30<sup>th</sup> June 2004**

## **Part A GENERAL**

### **0. Administration and control of Operations Manual**

#### *0.1 Introduction*

- (a) A statement that the manual complies with all applicable regulations and with the terms and conditions of the applicable Air Operator Certificate.
- (b) A statement that the manual contains operational instructions that are to be complied with by the relevant personnel.
- (c) A list and brief description of the various parts, their contents, applicability and use.
- (d) Explanations and definitions of terms and words needed for the use of the manual.

#### *0.2 System of amendment and revision*

- (a) Who is responsible for the issuance and insertion of amendments and revisions.
- (b) A record of amendments and revisions with insertion dates and effective dates.
- (c) A statement that handwritten amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety. Such temporary amendments must be authenticated by signature and stamp of a responsible person as per standard revision procedure.
- (d) A description of the system for the annotation of pages and their effective dates.
- (e) A list of effective pages.
- (f) Annotation of changes (on text pages and, as far as practicable, on charts and diagrams).
- (g) Temporary revisions.
- (h) A description of the distribution system for the manuals, amendments and revisions.
- (i) A type of manual (ring binder) where replacement of sheets is possible.
- (j) A handy type of manual possible to study in the cockpit.

### **1. Instructions outlining the responsibilities of operations personnel pertaining to the conduct of flight operations**

#### *1.1 Organisation and responsibilities.*

- 1.1.1 *Organisational structure.* A description of the organisational structure including the general company organigram and operations department

- organigram. The organigram must depict the relationship between the Operations Department and the other Departments of the company. In particular, the subordination and reporting lines of all Divisions, Departments etc., which pertain to the safety of flight operations, must be shown.
- 1.1.2 *Supervision of the operation by the operator.* A description of the system for supervision of the operation by the operator. This must show how the safety of flight operations and the qualifications of personnel are supervised. In particular, the procedures related to the following items must be described:
- (a) License and qualification validity;
  - (b) Competence of operations personnel; and
  - (c) Control, analysis and storage of records, flight documents, additional information and data.
- 1.1.3 *System of promulgation of additional operational instructions and information.* A description of any system for promulgating information which may be of an operational nature but is supplementary to that in the Operations Manual. The applicability of this information and the responsibilities for its promulgation must be included.
- 1.1.4 *Accident prevention and flight safety program.* A description of the main aspects of the flight safety program.
- 1.1.5 *Operational control.* A description of the procedures and responsibilities necessary to exercise operational control with respect to flight safety.
- 1.1.6 *Approved personnel.* The name of each approved personnel responsible for flight operations, the maintenance system, crew training and ground operations.
- 1.1.7 *Responsibilities and duties of operations management personnel.* A description of the duties, responsibilities and authority of operations management personnel pertaining to the safety of flight operations and the compliance with the applicable regulations.
- 1.1.8 *Authority, duties and responsibilities of the commander.* A statement defining the authority, duties and responsibilities of the commander.
- 1.1.9 *Duties and responsibilities of crew members other than the commander.*

**2. Rules limiting the flight time and flight duty periods and providing for adequate rest periods for flight crew members and cabin crew**

2.1 A description of the flight and duty time limitations and rest requirements as applicable to the operation

2.2 Conditions under which flight and duty time may be exceeded or rest period may be reduced and the procedures used to report these modifications.

**3. A list of navigational equipment to be carried**

3.1 Information about navigation equipment required to be carried for the type of operation can be found in CAR Series 'I' Part II.

**4. Where relevant to the operation, the long-range navigation procedures, engine failure procedure for ETOPS and the nomination and utilization of diversion aerodromes.**

4.1 A description of the ETOPS operational procedures.

**5. The circumstances in which a radio listening watch is to be maintained**

5.1 ICAO rules require an aircraft operated as a controlled flight to maintain continuous air-ground voice communication watch, and the operator may have the same requirement for other types of operations.

**6. The method for determining minimum flight altitudes**

6.1 A description of the method of determination and application of minimum altitudes including:

- (a) A procedure to establish the minimum altitudes/flight levels for VFR flights and;
- (b) A procedure to establish the minimum altitudes/flight levels for IFR flights.

**7. The method for determining aerodrome operating minima**

7.1 The method for establishing aerodrome operating minima for IFR flights in accordance with ICAO Annex 6. Reference must be made to procedures for the determination of the visibility and/or runway visual range (RVR) and for the applicability of the actual visibility observed by the pilots, the reported visibility and the reported RVR.

**8. Safety precautions during refueling with passengers on board**

8.1 A description of fuelling procedures, including:

- (a) Safety precautions during refueling and defueling when passengers are embarking, on board or disembarking; and
- (b) Refueling and defueling including when an APU is in operation or when a turbine engine is running and the prop-brakes are on;  
(Refer CAR Sec 2 Series 'H' Part II)
- (c) Precautions to be taken to avoid mixing fuels.

**9. Ground handling arrangements and procedures**

9.1 A description of the handling procedures to be used when allocating seats and embarking and disembarking passengers and when loading and unloading the aeroplane. Further procedures, aimed at achieving safety whilst the aeroplane is on the ramp, must also be given. Handling procedures must include:

- (a) Children/infants, sick passengers and Persons with Reduced Mobility;
- (b) Transportation of inadmissible passengers, deportees or persons in custody;
- (c) Permissible size and weight of hand baggage;
- (d) Loading and securing of items in the aeroplane;
- (e) Special loads and classification of load compartments;
- (f) Positioning of ground equipment;
- (g) Operation of aeroplane doors;
- (h) Safety on the ramp, including fire prevention, blast and suction areas;
- (i) Start-up, ramp departure and arrival procedures;
- (j) Servicing of aeroplanes;
- (k) Documents and forms for aeroplane handling; and
- (l) Multiple occupancy of aeroplane seats.

9.2 *Procedures for the refusal of embarkation.*

Procedures to ensure that persons who appear to be intoxicated or who demonstrate by manner or physical indications that they are under the influence of drugs, except medical patients under proper care, are refused embarkation.

**10. Procedures, as prescribed in Annex 12, for Pilots-in-command observing an accident.**

10.1 The procedures are described in ICAO Annex 12 chapter 5.

**11. The flight crew for each type of operation including the designation of the succession of command.**

11.1 *Crew Composition.* An explanation of the method for determining crew compositions taking account of the following:

- (a) The type of aeroplane being used;
- (b) The area and type of operation being undertaken;
- (c) The phase of the flight;
- (d) The minimum crew requirement and flight duty period planned;
- (e) Experience (total and on type), recency and qualification of the crew members; and
- (f) The designation of the commander and if necessitated by the duration of the flight, the procedures for relief of the commander or other members of the flight crew.
- (g) The designation of the senior cabin crew member and, if necessitated by the duration of the flight, the procedures for the relief of the senior cabin crew member and any other members of the cabin crew.

11.2 *Flight crew incapacitation.* Instructions on the succession of command in the event of flight crew incapacitation.

11.3 *Operation on more than one type.* A statement indicating which aeroplanes are considered as one type for the purpose of:

- (a) Flight crew scheduling; and
- (b) Cabin crew scheduling.

11.4 *Qualification requirements.* A description of the required license, rating(s), qualification/competency (e.g. for routes and aerodromes), experience, training, checking and recency for operations personnel to conduct their duties. Consideration must be given to the aeroplane type, kind of operation and composition of the crew.

11.4.1 *Flight crew*

- (a) Commander.
- (b) Pilot relieving the commander.
- (c) Co-pilot.
- (d) Pilot under supervision.
- (e) System panel operator.
- (f) Operation on more than one type or variant.

11.4.2 *Cabin crew*

- (a) Senior cabin crew member.
- (b) Cabin crew member.
  - (i) Required cabin crew member.
  - (ii) Additional cabin crew member and cabin crew member during familiarisation flights.
- (c) Operation on more than one type or variant.

11.4.3 *Training, checking and supervision personnel*

- (a) For flight crew.
- (b) For cabin crew.

11.4.4 *Other operations personnel*

11.5 *Crew Health Precautions*

11.5.1 The relevant regulations and guidance to crew members concerning health including:

- (a) Alcohol and other intoxicating liquor;
- (b) Narcotics;
- (c) Drugs;
- (d) Sleeping tablets;
- (e) Pharmaceutical preparations;
- (f) Immunisation;
- (g) Scuba diving;
- (h) Blood donation;
- (i) Meal precautions prior to and during flight;
- (j) Sleep and rest.

11.5.2 Pre-flight medical

**12. Specific instructions for the computation of the quantities of fuel and oil to be carried, having regard to all circumstances of the operation including the possibility of the failure of one or more powerplants while en route.**

12.1 The methods by which the quantities of fuel and oil to be carried are determined and monitored in flight. This section must also include instructions on the measurement and distribution of the fluid carried on board. Such instructions must take account of all circumstances likely to be encountered on the flight, including the possibility of in-flight replanning and of failure of one or more of the aeroplane's power plants. The system for maintaining fuel and oil records must also be described.

**13. The conditions under which oxygen shall be used and the amount of oxygen determined.**

13.1 An explanation of the conditions under which oxygen must be provided and used.

13.2 The oxygen requirements specified for:

- (a) Flight crew;
- (b) Cabin crew; and
- (c) Passengers

**14. Instructions for mass and balance control**

14.1 The general principles of mass and center of gravity including:

- (a) Definitions;
- (b) Methods, procedures and responsibilities for preparation and acceptance of mass and center of gravity calculations;
- (c) The policy for using either standard and/or actual masses;
- (d) The method for determining the applicable passenger, baggage and cargo mass;
- (e) The applicable passenger and baggage masses for various types of operations and aeroplane type;
- (f) General instruction and information necessary for verification of the various types of mass and balance documentation in use;
- (g) Last Minute Changes procedures;

- (h) Specific gravity of fuel and oil;
- (i) Seating policy/procedures.

**15. Instructions for the conduct and control of ground de-icing/anti-icing operations**

15.1 A description of the de-icing and anti-icing policy and procedures for aeroplanes on the ground. These shall include descriptions of the types and effects of icing and other contaminants on aeroplanes whilst stationary, during ground movements and during take-off. In addition, a description of the fluid types used must be given including:

- (a) Proprietary or commercial names;
- (b) Characteristics;
- (c) Effects on aeroplane performance;
- (d) Hold-over times; and
- (e) Precautions during usage.

**16. The specifications for the operational flight plan**

16.1 Procedures and responsibilities for the preparation and acceptance of the operational flight plan. The use of the operational flight plan must be described including samples of the operational flight plan formats in use.

**17. Standard operating procedures (SOP) for each phase of flight**

17.1 *Flight Preparation Instructions*. As applicable to the operation:

17.1.1 *Minimum Flight Altitudes*.

17.1.2 *Criteria for determining the usability of aerodromes*

17.1.3 *Methods for the determination of aerodrome operating minima*.

17.1.4 En-route Operating Minima for VFR Flights or VFR portions of a flight and, where single engined aeroplanes are used, instructions for route selection with respect to the availability of surfaces which permit a safe forced landing.

17.1.5 *Presentation and Application of Aerodrome and En-route Operating Minima*

17.1.6 *Interpretation of meteorological information.* Explanatory material on the decoding of MET forecasts and MET reports relevant to the area of operations, including the interpretation of conditional expressions.

17.1.7 *Determination of the quantities of fuel and oil carried.*

17.1.8 *Mass and balance control.*

17.1.9 *ATS Flight Plan.* Procedures and responsibilities for the preparation and submission of the air traffic services flight plan. Factors to be considered include the means of submission for both individual and repetitive flight plans.

17.1.10 *Operational Flight Plan.*

17.1.11 *Operator's aeroplane Technical Log.* The responsibilities and the use of the operator's aeroplanes Technical Log must be described, including samples of the format used.

17.1.12 *List of documents, forms and additional information to be carried*

17.2 *Ground handling arrangement and procedures.*

17.3 *Flight Procedures*

17.3.1 *VFR/IFR Policy.* A description of the policy for allowing flights to be made under VFR, or of requiring flights to be made under IFR, or of changing from one to the other. (Information can be found in ICAO Annex 2, chapter 3).

17.3.2 *Navigation Procedures.* A description of all navigation procedures relevant to the type(s) and area(s) of operation. Consideration must be given to:

- (a) Standard navigational procedures including policy for carrying out independent cross-checks of keyboard entries where these affect the flight path to be followed by the aeroplane;
- (b) MNPS and POLAR navigation and navigation in other designated areas;
- (c) RNAV;
- (d) In-flight replanning;
- (e) Procedures in the event of system degradation;
- (f) RVSM

17.3.3 *Altimeter setting procedures*

17.3.4 *Altitude alerting system procedures*

17.3.5 *Policy and procedures for in-flight fuel management*

17.3.6 *Adverse and potentially hazardous atmospheric conditions.* Procedures for operating in, and/or avoiding, potentially hazardous atmospheric conditions including:

- (a) Thunderstorms;
- (b) Icing conditions;
- (c) Turbulence;
- (d) Windshear;
- (e) Jet stream;
- (f) Volcanic ash clouds;
- (g) Heavy precipitation;
- (h) Sand storms;
- (i) Mountain waves; and
- (j) Significant Temperature inversions.

17.3.7 *Wake Turbulence.* Wake turbulence separation criteria, taking into account aeroplane types, wind conditions and runway location.

17.3.8 *Crew members at their stations.* The requirements for crew members to occupy their assigned seats during different phases of flight or whenever deemed necessary in the interest of safety.

17.3.9 *Use of safety belts for crew and passengers.* The requirements for crew members and passengers to use safety belts and/or harnesses during the different phases of flight or whenever deemed necessary in the interest of safety.

17.3.10 *Admission to Flight Deck.* The conditions for the admission to the flight deck of persons other than the flight crew. The policy regarding the admission of persons other than the flight crew in accordance with AIC 3 of 1997 must also be included.

17.3.11 *Use of vacant crew seats.* The conditions and procedures for the use of vacant crew seats.

17.3.12 *Incapacitation of crew members.* Procedures to be followed in the event of incapacitation of crew members in flight. Examples of the types of incapacitation and the means for recognizing them must be included.

17.3.13 *Cabin Safety Requirements.* Procedures covering:  
(a) Cabin preparation for flight, in-flight requirements and preparation for landing including procedures for securing the cabin and galleys;

- (b) Procedures to ensure that passengers are seated where, in the event that an emergency evacuation is required, they may best assist and not hinder evacuation from the aeroplane;
- (c) Procedures to be followed during passenger embarkation and disembarkation; and
- (d) Procedures when refueling/defueling with passengers embarking, on board or disembarking.
- (e) Smoking on board.

17.3.14 *Passenger briefing procedures.* The contents, means and timing of passenger briefing.

17.3.17 *Procedures for aeroplanes operated whenever required cosmic or solar radiation detection equipment is carried.* Procedures for the use of cosmic or solar radiation detection equipment and for recording its readings including actions to be taken in the event that limit values specified in the Operations Manual are exceeded. In addition, the procedures, including ATS procedures, to be followed in the event that a decision to descend or re-route is taken.

17.4 *AWO.* A description of the operational procedures associated with All Weather Operations.

17.5 *ETOPS.* A description of the ETOPS operational procedures.

17.6 *Use of the minimum equipment list.*

17.7 *Non revenue flights.* Procedures and limitations for:

- (a) Training flights;
- (b) Test flights;
- (c) Delivery flights;
- (d) Ferry flights;
- (g) Demonstration flights; and
- (h) Positioning flights,

including the kind of persons who may be carried on such flights.

**18. Instructions on the use of normal checklists and the timing of their use**

Instructions on the use of normal checks lists and the timing of their use with details on the Silent Checks, Challenge and Response Checks and the Verbal Checks.

**19. Departure contingency procedures**

19.1 Departure contingency procedures shall include:

- (a) Departure procedures described in the airport manual
- (b) Noise abatement procedures

**20. Instructions on the maintenance of altitude awareness and the use of automated or flight crew altitude call-out.**

20.1 A description of procedures used to maintain altitude awareness.

**21. Instructions on the use of autopilots and auto-throttles in IMC.**

21.1 A description of procedures used in IMC.

**22. Instructions on the clarification and acceptance of ATC clearances, particularly where terrain clearance is involved**

22.1 Instructions to include conditions under which deviations from clearances may be accepted.

**23. Departure and approach briefings.**

23.1 Description of briefing procedures for departures and approaches.

**24. Route and destination familiarization.**

24.1 A description of the required qualification/competency for routes and aerodromes.

**25. Stabilized approach procedure.**

25.1 A description of conditions required to obtain a stabilized approach.

25.2 Minimum altitude for being stabilized and a description of procedures to be followed in case approach is not stabilized at minimum altitude.

**26. Limitations on high rates of descent near the surface.**

26.1 A description of limitations and procedures to be followed when limitations are exceeded.

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- 27. Conditions required to commence or to continue an instrument approach**
- 27.1 A description of procedures to be used under which decisions are taken to commence, continue or discontinue an instrument approach
- 28. Instructions for the conduct of precision and non-precision instrument approach procedures**
- 28.1 A description of the operational procedures associated with precision and non-precision instrument approach procedures
- 29. Allocation of flight crew duties and procedures for the management of crew workload during night and IMC instrument approach and landing operations**
- 29.1 A description of the procedures for night and IMC instrument approaches and landing operations taking in consideration all safety precautions.
- 30. Instructions and training requirements for avoidance of controlled flight into terrain and policy for the use of the ground proximity warning system (GPWS).**
- 31. Policy, instructions, procedures and training requirements for the avoidance of collisions and the use of airborne collision avoidance system (ACAS)**
- 32. Information and instructions relating to the interception of civil aircraft including:**
- a) procedures, as prescribed in Annex 2, for pilots-in-command of intercepted aircraft; and
  - b) visual signals for use by intercepting and intercepted aircraft, as contained in Annex 2
- 33. For aeroplanes intended to be operated above 15 000 m (49 000 ft):**
- a) procedures which will enable the pilot to determine the best course of action to take in the event of exposure to solar cosmic radiation; and

- b) **procedures in the event that a decision to descent is taken, covering:**
  - 1) **the necessity of giving the appropriate ATS unit prior warning of the situation and of obtaining a provisional descent clearance; and**
  - 2) **the action to be taken in the event that communication with the ATS unit cannot be established or is interrupted.**
  
- 34. Details of the accident prevention and flight safety programme, including a statement of safety policy and the responsibility of personnel.**
- 34.1 A description of the main aspects of the flight safety programme including;
  - a) Programmes to achieve and maintain risk awareness by all persons involved in operations;
  - b) Evaluation of relevant information relating to accidents and incidents and the promulgation of related information.
  
- 35. Information and instructions on the carriage of dangerous goods, including action to be taken in the event of an emergency.**
- 35.1 Information, instructions and general guidance on the transport of dangerous goods including:
  - (a) Operator's policy on the transport of dangerous goods;
  - (b) Guidance on the requirements for acceptance, labeling, handling, stowage and segregation of dangerous goods;
  - (c) Procedures for responding to emergency situations involving dangerous goods;
  - (d) Duties of all personnel involved; and
  - (e) Instructions on the carriage of the operator's employees.
- 35.2 The conditions under which weapons, munitions of war and sporting weapons may be carried.
  
- 36. Security instruction and guidance**
- 36.1 Security instructions and guidance of a non-confidential nature which must include the authority and responsibilities of operations personnel. Policies and procedures for handling and reporting crime on board such as unlawful interference, sabotage, bomb threats, and hijacking must also be included.

36.2 A description of preventative security measures and training.

NOTE: Parts of the security instructions and guidance may be kept confidential.

**37. The search procedure checklist provided**

37.1 An operator shall ensure that there is on board a checklist of the procedures to be followed in searching for a bomb in case of suspected sabotage. The checklist shall be supported by guidance on a course of action to be taken should a bomb or suspicious object be found. (Refer ICAO Doc 9811 AN/766).

**Part B Aircraft operating information.**

**1. Certification limitations and operating limitations.**

- 1.1 A description of the certified limitations and the applicable operational limitations including:
- (a) Certification status;
  - (b) Passenger seating configuration for each aeroplane type including a pictorial presentation;
  - (c) Types of operation that are approved (e.g. IFR/VFR, CAT II/III, RNP Type, flights in known icing conditions etc.);
  - (d) Crew composition;
  - (e) Mass and center of gravity;
  - (f) Speed limitations;
  - (g) Flight envelope(s);
  - (h) Wind limits;
  - (i) Performance limitations for applicable configurations;
  - (j) Slope;
  - (k) Airframe contamination;
  - (l) System limitations.

**2. The normal, abnormal and emergency procedures to be used by the flight crew and the checklists relating thereto.**

- 2.1 The normal procedures and duties assigned to the crew, the appropriate check-lists, the system for use of the check-lists and a statement covering the necessary coordination procedures between flight and cabin crew. The following normal procedures and duties must be included:
- (a) Pre-flight;
  - (b) Pre-departure;
  - (c) Altimeter setting and checking;
  - (d) Taxi, Take-Off and Climb;
  - (e) Noise abatement;
  - (f) Cruise and descent;
  - (g) Approach, Landing preparation and briefing;
  - (h) VFR Approach;
  - (i) IFR approach;
  - (j) Visual Approach and circling;
  - (k) Missed Approach;
  - (l) Normal Landing;
  - (m) Post Landing.

2.2 The emergency procedures and duties assigned to the crew, the appropriate check-lists, the system for use of the check-lists and a statement covering the necessary coordination procedures between flight and cabin crew. The following emergency procedures and duties must be included:

- (a) Crew Incapacitation;
- (b) Fire and Smoke Drills;
- (c) Lightning Strikes;
- (d) Distress Communications and alerting ATC to Emergencies;
- (e) Engine failure;
- (f) System failures;
- (g) Guidance for Diversion in case of Serious Technical Failure;
- (h) AVAD warning;
- (i) Windshear;
- (j) Emergency Landing/Ditching;

**3. Operating instructions and information on climb performance with all engines operating, if provided.**

**4. Flight planning data for pre-flight and in-flight planning with different thrust/power and speed settings.**

4.1 Data and instructions necessary for preflight and in-flight planning. Where applicable, procedures for engine(s) out operations and flights to isolated airports must be included.

4.2.1 The method for calculating fuel needed for the various stages of flight.

**5. Instructions and data for mass and balance calculations**

5.1 Instructions and data for the calculation of the mass and balance including:

- (a) Calculation system (e.g. Index system);
- (b) Information and instructions for completion of mass and balance documentation, including manual and computer generated types;
- (c) Limiting masses and centre of gravity for the types, variants or individual aeroplanes used by the operator; and
- (d) Dry Operating mass and corresponding centre of gravity or index.

**6. Instructions for aircraft loading and securing of loads.**

6.1 Procedures and provisions for loading and securing the load in the aeroplane.

**7. Aircraft systems, associated controls and instructions for their use.**

7.1 A description of the aeroplane systems, related controls and indications and operating instructions.

**8. The minimum equipment list for the aeroplane types operated and specific operations authorized.**

8.1 The Minimum Equipment List (MEL) taking account of the aeroplane types and variants operated and the type(s)/area(s) of operation. The MEL must include the navigational equipment and take into account the required navigation performance for the route and area of operation.

**9. Checklist of emergency and safety equipment and instructions for its use.**

**10. Emergency evacuation procedures, including type-specific procedures, crew coordination, assignment of crew's emergency positions and the emergency duties assigned to each crew member.**

10.1 Instructions for preparation for emergency evacuation including crew coordination and emergency station assignment.

10.2 Emergency evacuation procedures. A description of the duties of all members of the crew for the rapid evacuation of a aeroplane and the handling of the passengers in the event of a forced landing, ditching or other emergency.

**11. The normal, abnormal and emergency procedures to be used by the cabin crew, the checklists relating thereto and aircraft systems information as required, including a statement related to the necessary procedures for the coordination between flight and cabin crew.**

11.1 Instructions of procedures for the coordination between flight and cabin crew under all conditions.

**12. Survival and emergency equipment for different routes and the necessary procedures to verify its normal functioning before take-off, including procedures to determine the required amount of oxygen and quantity available.**

12.1 A list of the survival equipment to be carried for the routes to be flown and the procedures for checking the serviceability of this equipment prior to take-off. Instructions regarding the location, accessibility and use of

- survival and emergency equipment and its associated check list(s) must also be included.
- 12.2 The procedure for determining the amount of oxygen required and the quantity that is available. The flight profile and number of occupants and possible cabin decompression must be considered. The information provided must be in a form in which it can be used without difficulty.
- 13. The ground-air visual code for use by survivors, as contained in Annex 12.**

**NOTE:** *When necessary information can be found in the Aircraft Flight Manual (AFM), a reference to the manual including the para, is sufficient.*

**Part C Routes and aerodromes.**

1. **A route guide to ensure that the flight crew will have, for each flight, information relating to communication facilities, navigation aids, aerodromes, instrument approaches, instrument arrivals and instrument departures as applicable for the operation, and such other information as the operator may deem necessary for the proper conduct of flight operations.**
  - 1.1 **A Jeppesen manual is a good example of a route guide.**
2. **The minimum flight altitudes for each route to be flown.**
3. **Aerodrome operating minima for each of the aerodromes that are likely to be used as aerodromes of intended landing or as alternate aerodromes.**
4. **The increase of aerodrome operating minima in case of degradation of approach or aerodrome facilities.**
5. **The necessary information for compliance with all flight profiles required by regulations, including but not limited to, the determination of:**
  - a) **take-off runway length requirements for dry, wet and contaminated conditions, including those dictated by system failures which affect the take-off distance;**
  - b) **take-off climb limitations;**
  - c) **en-route climb limitations;**
  - d) **approach climb limitations and landing climb limitations**
  - e) **landing runway length requirements for dry, wet and contaminated conditions, including systems failures which affect the landing distance; and**
  - f) **supplementary information, such as tire speed limitations.**

**Note :** For Part C of the Operations Manual, material produced by the operator may be supplemented with or substituted by applicable Route Guide material produced by a specialised professional company.

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## **Part D Training**

### **1. Details of flight crew training programme**

#### 1.1 Training syllabi and checking programmes for flight crew.

##### 1.1.1 Conversion training which must include:

- (a) Type rating course (if changing to a new type);
- (b) Operators course (if changing to a new operator);
- (c) Line flying under supervision;
- (d) Crew resource management training.

##### 1.1.2 Recurrent training and checking which must include:

- (a) Type or variant of aeroplane on which the crewmember is certificated to operate;
- (b) Ground refresher training;
- (c) Aeroplane/ flight simulator training;
- (d) Emergency and safety equipment training and checking;
- (e) CRM training;
- (f) Line checks.

##### 1.1.3 Route/Role/Area competence qualification.

##### 1.1.4 Special training for special operations.

### 2. Details of cabin crew duties training programme.

#### 2.1 Training syllabi and checking programmes for cabin crew including:

- (a) Initial training;
- (b) Conversion and difference training;
- (c) Recurrent training;
- (d) Refresher training;

### **3. Details of the flight operations officer/flight dispatcher training programme when employed in conjunction with a method of flight supervision.**

#### 3.1 Training syllabi and checking programmes for all relevant items pertaining to their duties.

**Note :** The above training programmes shall include the following procedures:

- a. Procedures for training and checking

- b. Procedures to be applied in the event that personnel do not achieve or maintain the required standards.
- c. Procedures to ensure that abnormal or emergency situations requiring the application of part of or all of abnormal or emergency procedures and simulation of IMC by artificial means, are not simulated during commercial air transportation flights.
- d. Description of documents to be stored and storage period.

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