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| **Statement of Compliance – Chapter 2: Operations Manual** |
| The line items referenced in this compliance matrix have been derived from CAAT as the minimum maintenance compliance requirements for an application for the Initial application, renewal and variation existing of an AOC.A completed statement of compliance must be submitted by the applicant for Initial application, renewal and variation existing. Additionally, the certificate holder should maintain an up-to-date compliance matrix to assist with on-going compliance and to support certificate amendment requests. The purpose of the statement of compliance is to speed up the certification process, ensure every applicable requirement has been addressed in the exposition and reduce the cost of certification by the quick location of required policies or procedures in the applicant’s exposition manual suite.**All requirements have to be complied with**, but not every requirement has to be addressed in the exposition. At least the following Requirements must be included unless they are not applicable to the operation, in which case they should be annotated N/A. The intention of this statement of compliance is to assist rather than instruct the applicant in an Initial application, renewal and variation existing. If for your operation, compliance is required with a Regulation not listed in the statement of compliance, please add it to the list and identify the exposition reference.This statement of compliance needs to be completed by every applicant for an AOC and show the exposition pages and paragraph numbers that satisfy CAATRequirements in the ***Manual References / Applicant’s Comments*** column. Where the applicant does not meet the CAAT Requirement or deems it not applicable, an explanation should be given in this column. **Please note that ticks ( √ ) are not acceptable.**The completed statement of compliance should accompany the exposition documents and preferably be included as a component of the exposition. The applicant may submit a completed statement of compliance in a different format as long as it includes all the Requirements references identified below; however, there may be additional processing time required by the CAAT in cross-referencing requirements.**General Manual Layout**Electronic exposition: Is the statement of compliance included as part of the file(s)/disc? If so, is it up to date? Have you considered the methods for distributing to the CAAT and how you will manage amendments? |

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| **Details of Applicant / AOC holder(s)** |
| **Instruction:** The operator shall indicate the references in the Operations Manual where the requirements are met. |
| **Name of Applicant / AOC holder(s):**  | Click or tap here to enter text. |
| **Date of Submission:** | Click or tap to enter a date. |
| **List of Manuals Submitted:** Click or tap here to enter text. |
| **Administration and Control of Manual** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
| A statement that the manual complies with all applicable regulations and with the terms and conditions of the applicable air operator certificate (AOC). | Click or tap here to enter text. | Click or tap here to enter text. |
| Explanations and definitions of terms and words needed for the use of the manual. | Click or tap here to enter text. | Click or tap here to enter text. |
| Details of the person(s) responsible for the issuance and insertion of amendments and revisions. | Click or tap here to enter text. | Click or tap here to enter text. |
| A record of amendments and revisions with insertion dates and effective dates. | Click or tap here to enter text. | Click or tap here to enter text. |
| A statement that handwritten amendments and revisions are not permitted, except in situations requiring immediate amendment or revision in the interest of safety. | Click or tap here to enter text. | Click or tap here to enter text. |
| A list of effective pages or paragraphs. | Click or tap here to enter text. | Click or tap here to enter text. |
| A description of the distribution system for the manuals, amendments and revisions. | Click or tap here to enter text. | Click or tap here to enter text. |
| On every page, headers and/or footers to include:1. Company name
2. Name of the manual
3. Effective revision and date of the page
4. page number
 | Click or tap here to enter text. | Click or tap here to enter text. |
| Index (not mandatory but desirable) | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **1 PURPOSE AND SCOPE OF MANUALS** |
| 1.1 Pursuant to Thailand RCAB 85 paragraph 3 (15a) the operator shall ensure that an Operations manual containing information and instructions as may be necessary to enable the operating staff to perform their duties is provided to such staff. The design of these manuals shall observe human factors principles.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 1.2 By definition included in the above Act, “operating staff” means the servants and agents employed by the operator, whether or not as members of the crew of the aircraft, to ensure that the flights of the aircraft are conducted in a safe manner and includes an operator who him/herself performs these functions. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1.3 It can readily be seen, therefore, that the form and scope of manuals will vary considerably with the nature and complexity of the operator’s organisation and the types of aircraft in use. A “manual” will normally comprise a number of separate volumes, and may well include individual forms such as prepared navigational flight plans supplied by the operator to his crew. Instructions and information to particular groups of operating staff - e.g. Traffic Manuals, Cabin Crew Manual, aircraft crew rostering instructions, safety and accident prevention manual and information on weight and balance supplied to handling agents - are all part of the operations manual. They must all be submitted together with copies of all amendments and temporary instructions. (See paragraph 10 of this chapter on Route Guides).  | Click or tap here to enter text. | Click or tap here to enter text. |
| 1.4 The purpose of this Chapter is to give some indication of the manner in which both the specific and general requirements (paragraph 1.1 above) should be met. Only the operation of aircraft will be dealt with; detailed instructions on aircraft maintenance (such as those included in a General Maintenance Manual (GMM) or in Maintenance Schedules) are in Chapter 9 of this AOCR and in the Authority Airworthiness Requirements. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1.5 The operations manual is the primary indication of the standards to be achieved by an operator. Public transport operation is a highly complex matter and must be based on clearly defined standards and procedures. The form and scope of a manual will vary with the size of the undertaking, nature and complexity of the operation. The adequacy of a manual will be assessed largely on this basis.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 1.6 Great importance will be attached to the suitability of manuals for regular use by the operating staff and in particular by aircraft crew in flight. For all but the simplest of operations, the division of the manual into a number of separate volumes will be essential. Manuals should be divided in such a way that essential information is immediately available on the flight deck, and extracts or “digests” of information and instructions may sometimes be necessary to supplement drill cards and check lists.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 1.7 Each copy of a manual should normally bear a serial number and a list of holders should be maintained by the person responsible for issuing amendments. Where this system is not used, an operator must have satisfactory alternative arrangements for controlling the issue and amendment of manuals. In any case, a method of acknowledgment of receipt of amendments by manual holders should be instituted. Each volume of a manual must be numbered and bear a title and index giving a clear indication of its scope. The title of the person or department responsible for the issue of the manual should also be indicated. At the front of each volume there must be an amendment page to indicate amendment number, date of incorporation, signature or initials of person amending, and page or paragraph affected. Amended pages should be dated. The numbering of pages, sections, paragraphs, etc. must be orderly and systematic so as to facilitate immediate identification of any part of the subject matter. The standard of printing, duplicating, binding, section dividers, indexing of sections, etc. must be sufficient to enable the document to be read without difficulty and to ensure that it remains intact and legible during normal use. |  |  |
| 1.8 The operator shall submit its Operations manual and subsequent amendments to the Authority for the acceptance or approval, as applicable, before issuing them to their users. The purpose of the acceptance and approval process is to verify the adequacy of the operator’s systems and procedures for keeping instructions and information under review and for issuing timely amendments as necessary. Evidence of such process are normally supported by the date, stamp and signature of an Authorised Officer. The operator is responsible for ensuring the accuracy and adequacy of the information provided in the manuals. It must be clearly understood by the operator that this responsibility rest solely with the operator who should designate a suitably qualified person or persons to ensure that this responsibility is properly discharged. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1.9 The amendment of the manuals in manuscript will not be acceptable. Any changes or additions, however slight they may be, should normally be incorporated by the issue of a fresh or additional page on which the amended materials are clearly indicated. In the cases where amendments related to safety may seek verbal approval in principle followed by the formal process in writing. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1.10 An operator shall provide, for the use and guidance of operations personnel concerned, an operations manual structured in accordance with Appendix B. This operation manual shall be acceptable to the Authority and shall be amended or revised as is necessary to ensure that the information contained therein is kept up to date. All such amendments or revisions shall be issued to all personnel that are required to use this manual. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1.11 All operators are required to have adequate procedures to ensure that the flight manual is updated by implementing changes made mandatory or approved by the State of Registry. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1.12 The form and scope of manuals will vary considerably with the nature and complexity of the operator’s organisation and types of aircraft in use. An operations manual shall be organized with the following structure, as provided in ICAO Annex 6 Part I Appendix 2: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. General;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Aircraft operating information;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Areas, routes and aerodromes; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Training
 | Click or tap here to enter text. | Click or tap here to enter text. |
|  Operations manuals and other standing instructions must be supplemented by a systematic procedure for bringing urgent or purely temporary information to the notice of operating staff and agents. This can be achieved by a numbered series of instructions or notices issued by or under the direct authority of a senior operations official. When the issue of a temporary instruction entails amendment of a standing instruction, the amendment must be made without undue delay and periodical check lists issued to show which of the temporary instructions are current. These instructions bring significant Aeronautical Information Circulars (AICs), NOTAMS, or changes in Aerodrome Operating Minima (AOM) for example, to the attention of crews, operating staff and the operator’s agents. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **2 CREW TO BE CARRIED** |
| 2.1 The operator must designate one pilot amongst the flight crew as pilot in command. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.2 It will normally be sufficient if the minimum crew of public transport is specified in the manual for each type of aircraft, together with a reference to the necessity for specialist crew members where appropriate. Note that the minimum crew for public transport will not necessarily be the same as the minimum crew specified in the Certificate of Airworthiness. In some cases, the operator will need to consider whether the particular circumstances of the operation call for the carriage of additional flight crew. It is a statutory requirement that an aircraft shall have a flight crew adequate in number and designation to ensure the safety of the flight. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.3 Except where the flight crew is limited to one or two pilots, brief instructions should be included as to the order and circumstances in which command is to be assumed by members of the crew. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.4 Detailed instructions must be included as to the circumstances in which co-pilots may be permitted to fly the aircraft. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.5 An aeroplane shall not be operated under the IFR or at night by a single pilot unless: |  |
| 1. approved by the Authority;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the flight manual does not require a flight crew of more than one;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the aeroplane is propeller-driven;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the maximum approved passenger seating configuration is not more than 9;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the maximum certificated take-off weight does not exceed 5700 kg;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the pilot-in-command has satisfied requirements of experience, training, checking and regency described in Chapter 4 para 19; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the aeroplane is equipped with:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. A serviceable autopilot that has at least altitude hold and heading select modes;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. A headset with a boom microphone or equivalent; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Means of displaying charts that enables them to be readable in all ambient conditions.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.6 Flight crew members at duty stations. |  |
| 1. Take-off and Landing. All flight crew members required to be on flight deck duty must be at their station.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. En-route. All flight crew members required to be on flight deck duty shall remain at their stations except when their absence is necessary for the performance of duties in connection with the operation of the aircraft or for physiological needs Seat belts. All flight crew members must keep their seat belts fasten when at their stations.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Safety harness. Any flight crew member occupying a pilot’s seat must keep the safety harness fastened during the take-off and landing phases; all other flight crew members must keep their safety harnesses fastened during the take-off and landing phases unless the shoulder straps interfere with the performance of their duties, in which case the shoulder straps may be unfastened but the seat belt must remain fastened.

***Note****: Safety harness includes shoulder straps and a seat belt which may be used independently.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.7 Flight crew equipment A flight crew member assessed as fit to exercise the privileges of a license, subject to the use of suitable correcting lenses, must have a spare set of the correcting lenses readily available when exercising those privileges. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **3 DUTIES OF AIRCRAFT CREW AND OTHER OPERATING STAFF** |
|  In this context, the term “operating staff”, as distinct from the aircraft crew, can be taken to mean staff having specific duties in relation to particular flights, which fall within the general pre-flight and in-flight responsibilities of the Pilot-in-Command. The manual must define the duties and responsibilities of people employed as: | Click or tap here to enter text. |
| 1. Pilot-in-Command of the aircraft;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Flight operations officers /flight dispatchers;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. rostering and scheduling staff.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 3.1 Pilot-in-Command |  |
| 1. The Pilot-in-Command shall be responsible for the safety of all crew members, passengers and cargo on board when the doors are closed. The pilot-in-command shall also be responsible for the operation and safety of the aeroplane from the moment the aeroplane is ready to move for the purpose of taking off until the moment it finally comes to rest at the end of the flight and the engine(s) used as primary propulsion units are shut down.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The Pilot-in-Command shall ensure that the checklists specified in paragraph 8 of this chapter are complied with in detail.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The Pilot-in-Command shall be responsible for notifying the nearest appropriate authority by the quickest available means of any accident involving the aeroplane, resulting in serious injury or death of any person or substantial damage to the aeroplane or property.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The Pilot-in-Command shall be responsible for reporting all known or suspected defects in the aeroplane, to the operator, at the termination of the flight sector.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The Pilot-in-Command shall be responsible for the journey log book or the general declaration containing the information listed in Chapter 5, paragraph 11.4 of this document.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 3.2 Flight operations officers/flight dispatchers shall, in conjunction with the operator’s method of control and supervision of flight operations: |  |
| 1. Assist the pilot-in-command in flight preparation and provide the relevant information required;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Assist the pilot-in-command in preparing the operational and ATS flight plans, sign when applicable and file the ATS flight plan with the appropriate ATS unit;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Furnish the pilot-in-command while in flight, by appropriate means, with information which may be necessary for the safe conduct of the flight; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Notify the appropriate ATS unit when the position of the aeroplane cannot be determined by an aircraft tracking capability, and attempts to establish communication are unsuccessful.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 3.3 In the event of an emergency, a flight operations officer/flight dispatcher shall: |  |
| 1. Initiate such procedures as outlined in the operations manual while avoiding taking any action that would conflict with ATC procedures;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Convey safety-related information to the pilot-in-command that may be necessary for the safe conduct of the flight, including information related to any amendments to the flight plan that become necessary in the course of the flight; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Where necessary, notify the appropriate authorities without delay and request for assistance if required, if the emergency endangers the safety of the aircraft or persons and becomes known first to the flight operations officer/flight dispatcher.

***Note:*** *It is equally important that the pilot-in-command also conveys similar information to the flight operations officer/flight dispatcher during the course of the flight, particularly in the context of emergency situations.*  | Click or tap here to enter text. | Click or tap here to enter text. |
| 3.4 In defining the duties of members of the aircraft crew, the operator should include instructions on:- |  |
| 1. The briefing of passengers on emergency exits and equipment (including, where appropriate, life-jacket demonstration and use of “automatic drop-out” oxygen equipment) and restrictions of personal radio, tape recorder, headphones, laptop computers, etc. in flight;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Who, in the absence of competent ground engineering staff, is responsible for supervising re-fueling and ensuring that filler caps, re-fueling valves, freight hold doors etc. are secured;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Who, in the absence of competent traffic staff, is responsible for supervising the loading of the aircraft;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The duties of special personnel such as car marshallers and animal attendants;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The responsibility, when an APU is ground running and passengers are on board the aircraft, or are in the process of embarking or disembarking, for ensuring that there are satisfactory arrangements for cabin crew to be warned immediately of any APU emergency condition which might require the rapid evacuation of passengers from the aircraft;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The responsibility for taking precautions for the safety of passengers when they are permitted to embark, disembark or to remain on board during fueling operations. There should be a nominated qualified person in attendance who shall be ready to initiate and direct an evacuation of the aircraft by the most practical and expeditious means available. Two-way communications shall be maintained by the aircraft’s intercommunication system or other suitable means between the ground crew and supervising and qualified personnel on board the aircraft;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The responsibility for ensuring correct completion of the Technical Log, day to day servicing and any pre-flight maintenance checks, ground de-icing and anti-icing operational procedures and checks before flight or any other special pre-flight servicing, i.e. when a flight is to be planned or expected to operate in suspected or known ground icing conditions, the flight shall not commence unless the aircraft has been inspected for icing and, if necessary, has been given appropriate de/anti-icing treatment. Accumulation of ice or other naturally occurring contaminants shall be removed so that the aircraft is kept in an airworthy condition prior to take-off; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Limitations on the extent to which pilots and flight engineers may be allowed to operate on more than one aircraft type or variant.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 3.5 Special consideration should be given to instructions on the arrangement of flight deck duties between the members of the flight crew, succession of command, and the procedures for double checking altimeter settings, and the selection and identification of radio aids. The risk of confusion or a serious oversight can be eliminated only if suitable routine procedures are laid down and meticulously observed both in training and in the course of normal operations. Operators are therefore required to specify such procedures in detail, with particular reference to the division of duties during take-off, en route and in the execution of an instrument approach procedure and “go around” in IMC, and to give them special emphasis in all training and periodical tests. The procedure for instrument approach in IMC in multi-crew aircraft should relieve the pilot-in-command of as much of the workload as possible, and through a proper division of duties and monitoring functions throughout the descent, provide adequate safeguards against error or omission. The difficulty of transition from instruments in poor visibility should be taken fully into account, together with the need for a clear and systematic procedure for initiating “go-around” if there is any doubt about the advisability of continuing the approach by visual reference to the ground.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 3.6 The division of duties between members of the crew in normal and emergency situations have to be promulgated. The division of duties between crew members in an emergency evacuation is discussed in paragraph 14 of this Chapter. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **4 FATIGUE MANAGEMENT OF CREW** |
| 4.1 The operator shall establish flight time, flight duty period, duty period and rest period limitations that are within the prescriptive fatigue management regulations established by the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.2 The detail of prescriptive fatigue management regulations in paragraph 4. 1 can be referred to Appendix C: Fatigue Management for Flight Crew and Cabin Crew. | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.3 Comprehensive guidance and instructions must be included in the manual for the benefit of both crew and those members of the operating staff who are concerned with rostering and scheduling. It may be necessary to issue one set of instructions for crew and a separate, more detailed set for other operating staff. | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.4 The extent to which a pilot-in-command is authorised in abnormal circumstances to exceed the operator’s limitations on flight duty periods must be clearly defined in the manual. Instructions on this point should be as clear and concise as possible, so that pilots-in-command can readily determine the extent of their discretionary powers.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.5 Instructions must include filing of reports by pilots-in-command or any crew members each time they exercise the discretion conferred upon them by the operator.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.6 Instructions must be issued to crew covering abstention from alcoholic drinks for a suitable period prior to flight. The minimum acceptable period will be 8 hours. Crew must also be advised of the precautions to be taken if they are undergoing medication. | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.7 Responsibility within an operator’s organisation for issuing instructions and making decisions on questions of flight, duty and rest periods and for processing discretion reports must be clearly defined and assigned to a member of the executive staff. The name of the person concerned, or the title of the office that he holds, must be included in the operations manual.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.8 The operator is required to maintain and provide readily interpreted records of flight time, flight duty periods, duty periods and rest period of flight and cabin crew members. It follows that there must be suitable arrangements for collecting the information necessary to compile the records. Accurate records are essential to persons responsible for the rostering of aircraft crew.  | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **5 TECHNICAL PARTICULARS OF AIRCRAFT** |
| 5.1 The operator shall provide, for each aircraft type operated, the “technical particulars of the aircraft” as part of the operational manual. The operator should take care to distinguish between specific information to be used in the course of flight operations and the more general basic information that a pilot might need to prepare for a technical type rating examination. If detailed descriptive matter is included as part of the manual, it should be in a separate volume. Information on the following matters, in particular, should be provided in a form suitable for use as an immediate reference in day-to-day operations: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Action to be taken in the kind of technical emergency or fault that cannot be covered by a set drill of vital actions. Information should be provided about the effect on essential systems and services of serious faults such as the loss of generated electrical power. Information to be provided will vary with the type of aircraft and together with the emergency drills it should be in a readily identified section of the manual (e.g. on distinctively coloured pages);
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Procedure for pre-departure inspection as required by the maintenance schedule including a check of the fuel system for water content;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Replenishment of the aircraft’s fuel, oil, coolant, hydraulic fluid, de-icing and water methanol supplies to an approved specification. Checking of accuracy of fuel uplift and total contents, particularly for operations in remote areas;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Supervising refueling and the topping up of tyres, oleos, de-icing and hydraulic systems, including oxygen and air reservoirs. The refueling information must include any specific precautions called for by:
2. The use of wide cut fuels; and
3. The “off aerodrome” situation where either a fueling vehicle or a barreled supply is used.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Calculation of critical airspeeds and Mach numbers, variable thrust, and tail plane settings;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Maker’s and/or operator’s limitations affecting the handling of engines and pressurisation systems;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Procedure and precautions to be observed in order to jettison fuel;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Compliance with any special handling instructions; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Procedure and precautions to be observed in response to ACAS, GPWS and wind shear alerts and warnings.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.2 With regard to aircraft performance, in addition to complying with the requirements in paragraph 29, operators should normally provide their pilots-in-command with information and simplified data from which they can readily determine without reference to a Flight Manual or Performance Schedule the maximum weight at which they may take-off or land on a particular flight. The maximum weight referred to is that resulting from the statutory weight and performance requirements, or limitations such as zero fuel weight contained in the Flight Manual. In many cases (on regular or scheduled operations) it would only be necessary to indicate that there was no restriction under the performance requirements; in others it might be necessary to indicate which of the requirements is critical and to provide a tabular or other clear presentation of limiting weights in varying environmental conditions such as wind and temperature. There would also be instances in which it would be both practicable and desirable for the operator to indicate any special flight procedures - such as minimum height for setting course in IMC or emergency turn after take-off in the event of engine failure - essential to secure compliance with the performance requirements in relation to the obstacle clearance data provided in the service providers accepted by the authority e.g. Aerads, Jeppesen or any other charts approved by the Authority or by the State of the Aerodrome.***Note****: As standard instrument departure (SID) routes do not guarantee adequate terrain clearance for all aircraft in the engine out case, the operator shall have checked that the performance requirements are met for all SIDs used by the company aircraft. Similarly, any emergency turn after take-off onto routes contained in the aircraft’s operations manual, and approved for use by the local air traffic control, must also have been checked for compliance with the performance requirements.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3 Information should also be given on the following points: |  |
| 5.3.1 Landing or take-off on runways affected by water, snow, slush or ice, with particular reference to techniques, the additional distances required and the crosswind limitations; | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3.2 Allowances to be made for the effect of varying surface conditions where grass strips are used; | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3.3 Crosswind limits for take-off and landing. It is not sufficient to repeat a statement in a flight manual that a particular crosswind component has been found to be acceptable; operators’ limitations should be stated in unequivocal terms. In gusty conditions, the limit shall apply to the mean of the reported steady wind and reported gusts. Limits in excess of any figure mentioned in the flight manual will not be acceptable. Lower limits must be stated for use on a contaminated runway and where appropriate for landing with control, steering, or retarding systems not fully serviceable or following an engine failure;  | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3.4 Minimum strip widths to be available after the clearance of snow, together with the maximum height of associated snow banks; | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3.5 For light aircraft, maximum permissible wind velocities for taxiing, take-off and landing; | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3.6 Allowances to be made for the effect of unserviceable devices such as flaps, reversers, air brakes, etc; | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3.7 Drift-down procedures to be followed on specific routes after failure of an engine, if the aircraft’s stabilising altitude is likely to be critical in terms of safety height: further guidance on the subject is stated in paragraph 29.11 of this chapter; | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3.8 Special handling techniques and/or routing procedures resulting from noise abatement regulations related to particular airfield and runways. The noise abatement procedures specified for any one aeroplane type should be the same for all aerodrome, unless otherwise approved by the Authority.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3.8.1 Noise Abatement Procedures |  |
| 1. Noise abatement regulations frequently require special handling techniques and routings after take-off. The flight manuals of the more recently certificated aeroplanes contain performance data related to noise abatement procedures. Details of the procedures for each airfield or runway used by the operator, for which noise abatement regulations exist, should be provided in the operations manual. Instructions to ignore noise abatement procedures in emergency situations should also be included; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Where, in exceptional circumstances, it may be appropriate in the course of noise abatement procedures to start a turn at less than 500 ft. AGL, pilots should be given suitable instructions about restricting the angle of bank. Pilots should also be instructed not to reduce thrust below 500 ft. AGL. Above 500 ft. AGL thrust should be reduced in accordance with the aircraft manufacturers instructions. In the absence of such guidance, thrust should not be reduced to an extent that would result in a gross gradient of climb of less than 4%.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3.9 Instructions on the conditions under which ferry flights with one engine inoperative can be undertaken, with details of the procedures to be followed;***Note:*** *In respect of any operating conditions for which no relevant data is provided in the flight manual or performance schedule, it is more important that the operator seeks information and approval of the data to be used from the Authority.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.4 A statement should be included in the manual to the effect that simulated instrument flight, and the simulation of emergency situations which might affect the flight characteristics of the aircraft, are prohibited on passenger or cargo carrying flights. | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.5 Aircraft instruments, equipment and flight documents, communication and navigation equipment as specified in the Authority Announcement shall be included. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
| --- | --- | --- |
| **6 FUEL FORMULA AND MANAGEMENT** |
| **6.1 Aeroplanes - Fuel Planning** |  |
| 6.1.1 A flight shall not commence unless the usable fuel on board meets all the requirements in 6.2.1 and 6.2.1(f), if required and shall not continue from the point of in-flight re-planning unless the usable fuel on board meets the requirements in 6.2.1 (b), (c), (d), (e), and (f), if required. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.1.2 To ensure departure with sufficient fuel for the flight and adequate reserves, the Standard Fuel Formula in paragraph 6.2 must normally be followed. In special circumstances and under certain conditions alternate formula may be used as detailed in paragraph 6.3, (Planning on an Alternative Destination with Re-Planning in Flight), and paragraph 6.4 (Isolated Aerodrome) of this chapter. Variation to pre-flight fuel calculations may be granted by the Authority in accordance with paragraph 6.5 of this chapter. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.1.3 Whichever formula is used, allowance should be made for, as appropriate: |  |
| 1. Auxiliary power unit;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Operation of systems such as de-icing which affect fuel consumption;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. A congested air traffic area where delays are likely;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Airfield where there is a need to climb to or descend from the en-route safety altitude whilst in the vicinity of the airfield; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Accuracy of the aircraft fuel gauges.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.1.4 The amount of usable fuel to be carried shall, as a minimum, be based on: |  |
| 1. The following data:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Current aeroplane-specific data derived from a fuel consumption monitoring system, if available; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. If current aeroplane-specific data are not available, data provided by the aeroplane manufacturer; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The operating conditions for the planned flight including:
 |  |
| 1. Anticipated aeroplane mass;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Notices to Airmen;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Current meteorological reports or a combination of current reports and forecasts;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Air traffic services procedures, restrictions and anticipated delays; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The effects of deferred maintenance items and/or configuration deviations.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.1.5 There should be instructions and guidance on the effect on fuel consumption of engine or system failure. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.1.6 Where necessary requirements for oil, water methanol, etc as well as fuel should be specified. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.1.7 Pilots-in-command must be allowed to carry more than the minimum fuel, at their discretion. | Click or tap here to enter text. | Click or tap here to enter text. |
| **6.2 Standard Fuel Formula** |  |
| 6.2.1 The pre-flight calculation of usable fuel required shall include: |  |
| 1. Start-up and taxi fuel which shall be the amount of fuel expected to be consumed before take-off taking into account local conditions at the departure aerodrome and auxiliary power unit (APU) fuel consumption, and may be expressed in standard fixed amount;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Trip fuel, which shall be the fuel to destination comprising fuel to enable the aircraft to take-off, climb, cruise, descent, approach and land at the destination aerodrome taking into account the operating conditions of 6.1.4 (b);
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Contingency fuel, which shall be the amount of fuel required to compensate for unforeseen factors. It shall be 5 percent (or not less than conditions of 3 percent refer to Doc 9976) of the planned trip fuel or of the fuel required from the point of re-planning but in any case, shall not be lower than the amount required to fly for five minutes at holding speed at 450 m (1500 ft) above the destination aerodrome in standard conditions;

***Note:*** *Unforeseen factors are those which could have an influence on the fuel consumption to the destination aerodrome, such as deviations of an individual aeroplane from the expected fuel consumption data, deviations from forecast meteorological conditions, extended taxi times before take-off, and deviations from planned routings and/or cruising levels.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Destination alternate fuel which shall be:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Where a destination alternate aerodrome is required, the amount of fuel required to enable the aeroplane to:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| (1) Perform a missed approach at the destination aerodrome;  | Click or tap here to enter text. | Click or tap here to enter text. |
| (2) Climb to the expected cruising altitude;  | Click or tap here to enter text. | Click or tap here to enter text. |
| (3) Fly the expected routing to the destination alternate airport;  | Click or tap here to enter text. | Click or tap here to enter text. |
| (4) Descend to the point where the expected approach is initiated; and  | Click or tap here to enter text. | Click or tap here to enter text. |
| (5) Conduct the approach and landing at the destination alternate aerodrome; or  | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Where two destination alternate aerodromes are required, the amount of fuel, as calculated in paragraph 6.2.1 (d) (i), required to enable the aeroplane to proceed to the destination alternate aerodrome which requires the greater amount of the alternate fuel; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Where a flight is operated without a destination alternate aerodrome, the amount of fuel required to enable the aeroplane to fly for 15 minutes at holding speed at 450 m (1500 ft) above destination aerodrome elevation in standard conditions;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Final reserve fuel, which shall be the amount of fuel calculated using the estimated mass on arrival at the destination alternate aerodrome or the destination aerodrome when no destination alternate is required:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For a reciprocating engine aeroplane, the amount of fuel required to fly for 45 minutes, under the appropriate speed and altitude; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For a turbine engine aeroplane, the amount of fuel required to fly for 30 minutes at holding speed at 450 m (1500 ft) above aerodrome elevation in standard conditions.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Additional fuel, which shall be the supplementary amount of fuel if the minimum fuel calculated in accordance with (b), (c), (d), and (e) is not sufficient to:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Allow the aeroplane to descend as necessary and proceed to an alternate aerodrome in the event of engine failure or loss of pressurisation, whichever requires the greater amount of fuel based on the assumption that such a failure occurs at the most critical point along the route;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Fly for 15 minutes at holding speed at 450 m (1500 ft) above aerodrome elevation in standard conditions; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Make an approach and landing;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Allow an aeroplane engaged in EDTO to comply with the EDTO critical fuel scenario as established by the Authority; and.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Meet any other situations that may require additional fuel.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The Pilot-in-Command may determine the discretionary fuel, which shall be the extra amount of fuel to be carried onboard.

***Note 1****: Fuel planning for a failure that occurs at the most critical point along a route (6.2.1(f) (ii)) may place the aeroplane in a fuel emergency situation based on 6.5.1.****Note 2:*** *To cater for very short sectors, and for alternates which are close to the destination, operators should specify a minimum contingency fuel and a minimum diversion fuel. For long haul operations and with Authority approval, the contingency fuel may be capped at a maximum value.****Note 3****: Operators should determine one final reserve fuel value for each aeroplane type and variant in their fleet rounded up to an easily recalled figure.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.3 **Planning on an Alternative Destination with Re-despatch in Flight** |  |
| 6.3.1 For planning an alternate destination with re-despatch in flight: |  |
| 1. The trip fuel in paragraph 6.2.1(b) shall comprise:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Fuel from take-off including climb and cruise to the in-flight redespatch (re-planning) point; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Fuel from the in-flight re-despatch point to landing at the final destination.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The contingency fuel in paragraph 6.2.1(c) may be reduced to 5% of the planned fuel burn from the in-flight re-despatch (re-planning) point to the final destination, but not below the operator’s stated minimum contingency fuel.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.3.2 The total fuel load calculated for paragraph 6.3.1 shall be increased if necessary, to not less than the fuel load needed for flight to the alternate destination, calculated in accordance with paragraph 6.2. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.3.3 The alternative destination must be available for landing at the appropriate time, and its weather forecast must allow a technical stop to be made. | Click or tap here to enter text. | Click or tap here to enter text. |
| **6.4 Isolated Aerodrome** |  |
| 6.4.1 Where because the destination is geographically isolated, there is no usable alternate aerodrome, items (d) and (e) of paragraph 6.2.1 may be replaced by a holding reserve related to statistical data on local weather conditions. The minimum acceptable will be: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For a reciprocating engine aeroplane, the amount of fuel required to fly for 45 minutes plus 15 percent of the flight time planned to be spent at cruising level, including final reserve fuel, or two hours, whichever is less; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For a turbine engine aeroplane the amount of fuel required to fly for two hours at normal cruise consumption above the destination aerodrome, including final reserve fuel. Such aerodromes are to be listed in the operations manual.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| **6.5 Variation to Pre-flight fuel Calculations** |  |
| 6.5.1 Notwithstanding the provisions in 6.2.1(a), (b), (c), (d), (e) and 6.2.2, the Authority may, based on the results of a specific safety risk assessment conducted by the operator which demonstrates how an equivalent level of safety will be maintained, approve variations to the pre-flight fuel calculation of taxi fuel (6.2.1(a)), trip fuel (6.2.1(b)), contingency fuel (6.2.1.(c)), destination alternate fuel (6.2.1(d)), destination alternate contingency fuel (6.2.1(e)) and additional fuel (6.2.2). The specific safety risk assessment shall include at least the: |  |
| Flight fuel calculations; | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Capabilities of the operator to include:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. A data-driven method that includes a fuel consumption monitoring programme; and/or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The advanced use of alternate aerodromes; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Specific mitigation measures.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Guidance for the specific safety risk assessment, fuel consumption monitoring programmes and the advanced use of alternate aerodromes is contained in the Flight Planning and Fuel Management Manual (Doc 9976).*  | Click or tap here to enter text. | Click or tap here to enter text. |
| **6.6 Aeroplanes - In flight Fuel Management** |  |
| 6.6.1 An operator shall establish policies and procedures, approved by the Authority, to ensure that in-flight fuel checks and fuel management are performed. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.6.2 Crew must be given suitable instructions on monitoring of fuel used and ensuring fuel remaining on board is not less than the fuel required to proceed to an aerodrome where a safe landing can be made with the planned final reserve fuel remaining upon landing. The records required by these instructions should be retained for at least three months. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.6.3 When an aircraft has been dispatched under paragraph 6.4 a decision must be made at or before decision point whether to land at the alternate destination or re-planning to the final destination. The manual must contain instructions that the aircraft may only be re-planning if the fuel on board is sufficient to reach the final destination (6.2.1(b)) with contingency fuel (6.2.1(c)), destination alternate fuel (6.2.1(d)), destination alternate contingency fuel (6.2.1(e)) and final reserve fuel (6.2.1(e)) as per paragraph 6.2 calculation, or fuel sufficient to reach the final destination (6.2.1(b)) and contingency fuel (6.2.1(c)) with reserves of paragraph 6.3.1 if all the conditions of paragraph 6.3.2 are met. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.6.4 The manual must state that in the event of a diversion, the fuel on-board shall be sufficient for the aircraft to arrive at the alternate with at least final reserve fuel (6.2.1(e)) upon landing. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.6.5 When any abnormal fuel procedure is used in flight, the pilot-in-command must be informed and at least two crew members must monitor the operation.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.6.6 Instructions may be included in the manual to allow crew to continue a flight to a destination when normal reserve fuel will no longer be available. Safeguarding conditions associated with those instructions shall include: |  |
| 1. such a decision to continue should only be made when one hour or less from the destination and when close to a usable en-route aerodrome;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The usable fuel remaining must be sufficient to fly to the destination aerodrome, make an approach with at least final reserve fuel (6.2.1(e)) upon landing;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The actual and forecast meteorological conditions at the destination shall permit a visual approach to landing until one hour after ETA. Account of any significant crosswind on the runway should also be considered;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. There are no known or probable ATC delays for the period from ETA to ETA plus one hour; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. there are at least two independent runways available and suitable for landing.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.6.7 The pilot-in-command shall request delay information from ATC when unanticipated circumstances may result in landing at the destination aerodrome with less than the final reserve fuel plus any fuel required to proceed to an alternate aerodrome or the fuel required to operate to an isolated aerodrome. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.6.8 The pilot-in-command shall advise ATC of a minimum fuel state by declaring MINIMUM FUEL when, having committed to land at a specific aerodrome, the pilot calculates that any change to the existing clearance to that aerodrome may result in landing with less than planned final reserve fuel. | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note1****: The declaration of MINIMUM FUEL informs ATC that all planned aerodrome options have been reduced to a specific aerodrome of intended landing and any change to the existing clearance may result in landing with less than planned final reserve fuel. This is not an emergency situation but an indication that an emergency situation is possible should any additional delay occur.* | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note2****: Guidance on declaring minimum fuel is contained in the Flight Planning and Fuel Management Manual (Doc 9976).* | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.6.9 The pilot-in-command shall declare a situation of fuel emergency by broadcasting MAYDAY MAYDAY MAYDAY FUEL, when the calculated usable fuel predicted to be available upon landing at the nearest aerodrome where a safe landing can be made is less than the planned final reserve fuel. | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 1:*** *The planned final reserve fuel refers to the value calculated in 6.2.1(e) (i) or (ii) and is the minimum amount of fuel required upon landing at any aerodrome.* | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 2****: The words “MAYDAY FUEL” describe the nature of the distress conditions as required in Annex 10, Volume II, 5.3.2.1, b) 3.* | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 3:*** *Guidance on procedures for in-flight fuel management can be found in the Flight Planning and Fuel Management Manual (Doc 9976)* | Click or tap here to enter text. | Click or tap here to enter text. |
| **6.7 Fuel and oil records** |  |
| 6.7.1 The operator shall maintain fuel records to enable the Authority to ascertain that, for each flight, the requirements of paragraph 6.1 to 6.6 have been complied with. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.7.2 The operator shall maintain oil records to enable the Authority to ascertain that trends for oil consumption are such that an aeroplane has sufficient oil to complete each flight. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.7.3 Fuel and oil records shall be retained by the operator for a period of three months. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **7 USE OF OXYGEN AND PROVISION OF EQUIPMENT OXYGEN SUPPLY AND USE OF OXYGEN** |  |
| **7.1 Oxygen supply*****Note:*** *Approximate altitudes in the Standard Atmosphere corresponding to the values of absolute pressure used in the text are as follows:*

|  |  |  |
| --- | --- | --- |
| *Absolute pressure* | *Metres* | *Feet* |
| *700 hPa* | *3 000* | *10 000* |
| *620 hPa* | *4 000* | *13 000* |
| *376 hPa* | *7 600* | *25 000* |

 | Click or tap here to enter text. | Click or tap here to enter text. |
| 7.1.1 A flight to be operated at flight altitudes at which the atmospheric pressure in personnel compartments will be less than 700 hPa shall not be commenced unless sufficient stored breathing oxygen is carried to supply: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. All crew members and 10 percent of the passengers for any period in excess of 30 minutes that the pressure in compartments occupied by them will be between 700 hPa and 620 hPa; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The crew and passengers for any period that the atmospheric pressure in compartments occupied by them will be less than 620 hPa.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 7.1.2 A flight to be operated with a pressurized aeroplane shall not be commenced unless a sufficient quantity of stored breathing oxygen is carried to supply all the crew members and passengers, as is appropriate to the circumstances of the flight being undertaken, in the event of loss of pressurization, for any period that the atmospheric pressure in any compartment occupied by them would be less than 700 hPa. In addition, when an aeroplane is operated at flight altitudes at which the atmospheric pressure is less than 376 hPa, or which, if operated at flight altitudes at which the atmospheric pressure is more than 376 hPa and cannot descend safely within four minutes to a flight altitude at which the atmospheric pressure is equal to 620 hPa, there shall be no less than a 10-per cent supply for the occupants of the passenger compartment. | Click or tap here to enter text. | Click or tap here to enter text. |
| **7.2 Use of oxygen** |  |  |
| 7.2.1 All flight crew members, when engaged in performing duties essential to the safe operation of an aeroplane in flight, shall use breathing oxygen continuously whenever the circumstances prevail for which its supply has been required in 7.1.1 or 7.1.2. | Click or tap here to enter text. | Click or tap here to enter text. |
| 7.2.2 All flight crew members of pressurized aeroplanes operating above an altitude where the atmospheric pressure is less than 376 hPa shall have available at the flight duty station a quick-donning type of oxygen mask which will readily supply oxygen upon demand. | Click or tap here to enter text. | Click or tap here to enter text. |
| 7.2.3 Cabin crew should be safeguarded so as to ensure reasonable probability of their retaining consciousness during any emergency descent which may be necessary in the event of loss of pressurization and, in addition, they should have such means of protection as will enable them to administer first aid to passengers during stabilized flight following the emergency. Passengers should be safeguarded by such devices or operational procedures as will ensure reasonable probability of their surviving the effects of hypoxia in the event of loss of pressurization.***Note:*** *It is not envisaged that cabin crew will always be able to provide assistance to passengers during emergency descent procedures which may be required in the event of loss of pressurization.* | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **8 CHECK LISTS** |
| 8.1 The operator shall establish the use of checklists as an integral part of the organisation’s standard operating procedures (SOPs). Flight crew and cabin crew shall be instructed on the use of these checklists. SOPs specify a sequence of tasks and actions to ensure that flight procedures can be carried out in a safe, efficient, logical and predictable manner. To achieve these objectives, SOPs should unambiguously express; | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. What the task is;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. When the task is to be conducted (time and sequence);
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. By whom the task is to be conducted;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. How the task is to be done (actions);
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. What the sequence of actions consists of; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. What type of feedback is to be provided as a result of the actions (verbal call-out, instrument indication, switch position, etc.)
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Guidance material on crew briefing is available on ICAO Doc 8168 Volume 1 Part III Section 5 chapter 3 and CAAT GM Standard Operating Procedures*  | Click or tap here to enter text. | Click or tap here to enter text. |
| 8.2 The drills and checks to be followed in the operation of the aircraft, including those for non-normal or emergency conditions, should be listed in full in the manual -preferably in a separate volume. Emergency equipment checklists and instructions on their use should also be provided. The pilot-in-command shall ensure that the checklists are complied with. The design of the checklists shall observe human factors principles.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 8.3 There should be items in the normal drill requiring the pilot-in-command to brief other flight crew members on the following matters: | Click or tap here to enter text. |
| 8.3.1 Prior to take-off: |  |
| 1. The actions to be taken in the event of an emergency arising during or immediately after take-off;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Any special requirements for take-off in crosswinds and on wet or otherwise contaminated runways;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Noise abatement procedures;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Selection of radio aids.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 8.3.2 Prior to landing: |  |
| 1. Selection of radio aids;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Missed approach procedures;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Any special handling or systems requirements for landing;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Selected alternate for diversion.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note****: It is not suggested that these items should be included in checklists in detail; if suitable instructions are provided elsewhere, the word ‘briefing’ will be sufficient at the appropriate points in the lists.*  | Click or tap here to enter text. | Click or tap here to enter text. |
| 8.4 Checklists will not be acceptable unless they include detailed requirements for the setting and cross checking of altimeters for all phases of flight. There should also be an item in the normal drills requiring minimum safe altitudes to be checked before descending from cruising level. | Click or tap here to enter text. | Click or tap here to enter text. |
| 8.5 Examples of emergency drills to be covered in checklists are: |  |
| 1. Engine failure;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Engine fire and severe engine damage;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Propeller malfunction;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Failure of normal feathering system;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Fuel filter icing;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Relighting of turbine engines;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Bus-bar and other serious electrical failures;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Malfunction of power control systems;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Pressurisation failure and emergency descent;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Cabin/hold fire;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Smoke removal;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Essential actions prior to commencement of emergency evacuation;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Hydraulic failures;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Brake overheat.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 8.6 In aircraft operated by two pilots, checklists should be stowed so that they are available to both pilots. If this is not possible, separate drill cards or checklists should be provided for each pilot for use on the flight deck. If the flight crew includes a flight engineer or third pilot a separate checklist should be provided for his/her use. In “single pilot” aircraft, checklists should be supplemented by the placarding of vital actions for final approach and landing. Emergency drills should be clearly marked for immediate use and, on larger and more complex aircraft, they should preferably be given on a separate set of cards kept apart from other documents on the flight deck and immediately available. For cabin crew, details of their ditching, crash landing and emergency evacuation drills should be readily available in flight. This can be achieved either by issue to each member of the cabin crew of a copy of their emergency drills - which they should be required to carry with them - or by stowing the drill cards at appropriate positions in the cabin. All check lists or drill cards must be of a quality sufficient to withstand heavy wear and to remain in legible condition.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 8.7 On multi-crew aircraft, the manual should contain clear instructions that checklists are always to be used. On single pilot aircraft, the operator may at his discretion allow in-flight drills to be carried out from memory. When an operator elects to adopt this procedure, he/she must, nevertheless, ensure that the aircraft is provided with a checklist which is readily available to the pilot. Memorised drills must be carried out strictly in accordance with the checklist and emergency drills must be verified as soon as possible by reference to the checklist.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 8.8 Aeroplane search procedure checklist | Click or tap here to enter text. | Click or tap here to enter text. |
| 8.8.1 In order to safe passengers, crew, ground personnel and the general public in all matters related to safeguarding against acts of unlawful interference with civil aviation., the operator shall ensure that aircraft security search and check have to be undertaken as required in National Civil Aviation Security Programme (NCASP) of the Kingdom of Thailand. | Click or tap here to enter text. | Click or tap here to enter text. |
| 8.8.2 The operator shall ensure that all aeroplanes carry a checklist of the procedures to be followed for that aeroplane type in searching for concealed weapons, explosives, or other dangerous devices when a well-founded suspicion exists that the aeroplane may be the object of an act of unlawful interference. The operator shall also support the checklist with guidance on the appropriate course of action to be taken should a bomb or suspicious object be found and provide information on the least-risk bomb location specific to that aeroplane type. The requirement as well as the citeria of using the checklist has to be in line with the current revision of National Civil Aviation Security Programme (NCASP) of the Kingdom of Thailand. | Click or tap here to enter text. | Click or tap here to enter text. |
| 8.9 Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods |  |
| 8.9.1 Operators hold dangerous goods specific approval shall ensure that for consignments for which a dangerous goods transport document is required by Technical Instruction (TI), appropriate information is immediately available at all times for use in emergency response to accidents and incidents involving dangerous goods in air transport. The information must be available to the Pilot-in-command and can be provided by: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The ICAO document Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (Doc 9481): or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Any other document which provides appropriate information concerning the dangerous goods on board:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Operators do not hold dangerous goods specific approval shall provide cabin crew provision of information for use in responding to dangerous goods incidents in flight.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 8.9.2 Operators are required to provide a “Dangerous goods emergency response kit” for use aboard an aircraft and training crew members regarding its use. A typically dangerous goods emergency response kit contains: |  |
| 1. Large, good quality polyethylene bags;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Bag ties; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Long rubber gloves.
 | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
| --- | --- | --- |
| **9 RADIO WATCH** |  |
| 9.1 The operator shall provide radio watch instructions to require a member of the flight crew to maintain a continuous watch on the emergency frequency 121.5 MHz and appropriate operational frequencies, to the extent possible. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
| --- | --- | --- |
| **10 ROUTE GUIDES** |  |  |
| 10.1 The route guide should be a volume or series of volumes separate from the rest of the operations manual. Aerad, Jeppesen or similar publications approved by the Authority will normally meet the requirement provided that flight crew are given adequate advice on the route to be followed. An operator providing his own guide should ensure that it meets the needs of crew in every respect. If flights are to be made only on airways or advisory routes (ADRs), it will be sufficient to include instructions to that effect; otherwise routes regularly flown should be specified in detail, normally on prepared navigation flight plans. For other flights, routes should be specified in a pilot-in-command’s flight brief, a copy being retained at base. Operators are not required to lodge copies of standard of service providers accepted by the authority e.g. Aerad or Jeppesen flight guides with the Authority.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.2 Particular care should be taken to ensure that adequate information is provided on; search and rescue facilities, obstructions in the approach pattern, radio failure procedures, prohibited and danger areas, standard TMA routings, seasonal meteorological conditions, ATC communications and navigational facilities and procedures associated with the route along the route(s) and applicable procedures over heavily populated areas and areas of high traffic intensity, obstructions, physical layout, lighting, approach aids and arrival, departure holding and instrument approach procedures, and applicable operating minima. Only recognised instrument approach or let-down procedures in general use should normally be included in the flight guide. Exceptionally, a special “break cloud” procedure devised by the operator may be considered acceptable provided it has been approved by the appropriate airport authority. Proposals to use such special procedures, accompanied by the associated aerodrome operating minima, should be submitted for approval to the Authority.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.3 Normally, the cancellation of IFR flight plans at night or in congested terminal areas should be prohibited, and instructions to this effect included in the manual. If an operator does not wish to impose a total prohibition, detailed instructions should be included in the manual setting out the minimum conditions that must be satisfied before cancellation of an IFR flight plan.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.4 In order to facilitate effective monitoring of an instrument approach by members of the flight crew, operators of multi-crew aircraft should provide for use on the flight deck at least two copies of the instrument approach charts to be used.  | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
| --- | --- | --- |
| **11 METEOROLOGICAL AND VOLCANIC ACTIVITIES REPORTS FROM AIRCRAFT** |
| 11.1 The operator shall establish a policy and procedures for its flight crew to record and report meteorological observations and volcanic activity observed during flight. | Click or tap here to enter text. | Click or tap here to enter text. |
| 11.2 Instructions on the reporting of meteorological observations and volcanic activities should be based on information and guidance provided in the CAAT AIP and/or in the publications issued by the foreign authorities responsible for the airspaces through which the flight is flown. | Click or tap here to enter text. | Click or tap here to enter text. |
| 11.3 The operator shall require its flight crew to report special observations of the following conditions encountered or observed during climb out and approach:  |  |
| 1. Moderate or severe turbulence; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Moderate or severe icing; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Severe mountain wave; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Thunderstorms, without hail, that are obscured, embedded, widespread or in squall lines; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Thunderstorms, with hail, that are obscured, embedded, widespread or in squall lines; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Heavy duststorm or heavy sandstorm; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Volcanic ash cloud; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Pre-eruption volcanic activity or a volcanic eruption.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Pre-eruption volcanic activity in this context means unusual and/or increasing volcanic activity which could presage a volcanic eruption.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 11.4 Special aircraft observations of pre-eruption volcanic activity, volcanic eruption or volcanic ash cloud shall be recorded on the special Air-Report of Volcanic Activity form. A copy of the form shall be delivered by the operator or the flight crew member, without delay, either personally or by email safetyreport@caat.or.th or https://caat.or.th/occurrence/ | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
| --- | --- | --- |
| **12 MINIMUM SAFE ALTITUDES** |
| 12.1 The method for establishing the minimum flight altitudes shall be approved by the Authority. |  |
| 12.2 The minimum safe altitude must be prescribed by the operator for each sector of each route to be flown including routes to “alternate” aerodromes. For this purpose, “sector” means the intended track from one reporting or turning point to the next, until the aircraft starts the instrument approach procedure (or joins the traffic pattern) at the aerodrome to be used for landing. Except as provided in paragraph below these figures must be specified by the operator prior to flight - in the appropriate volume of the manual, in a prepared navigational flight plan, or in the pilot-in-command’s flight brief (details in Chapter 5 paragraphs 11 and 12). | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.3 To meet the needs of the pilot-in-command when he/she is obliged to depart from the planned or normal route, operators must include in the manual instructions from which the minimum flight altitude can readily be determined. | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.4 In specifying minimum flight altitude, operators must take account of any local regulations and limitations. Such minimum altitudes shall not be lower than any which may be applicable under the law of Thailand or of the countries whose territory is to be flown over. The instructions should include maintenance of altitude awareness and the use of automated or flight crew altitude or flight crew call-out; the use of auto-pilot and auto-throttles in IMC; the clarification and acceptance of ATC clearances, particularly where terrain clearance is involved. Operators must specify limitations on high rate of descent near the surface. | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.5 The criteria upon which minimum altitudes are based will necessarily be determined to some extent by the track guidance facilities available to the pilot-in-command, and by the extent to which pilots-in-command and operators are able in particular circumstances to accept the directions of radar controllers. The minimum acceptable standards will normally be as follows |  |
| 1. For general application: 1,500 feet above the highest terrain or obstacle within 20 NM. of the intended track, with additional provision where necessary for terrain or obstacles within 10 degrees of intended track from the last known position.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For flight in controlled airspace where the track is well defined by two separate aids: 1,500 feet above the highest terrain or obstacle within 10 NM. of the intended track.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For radar-controlled flight within 25 NM. of the aerodrome of departure or intended landing: 1,000 feet above the highest terrain or obstacle within 5 NM. of the intended track. Pilots-in-command should be instructed to monitor all radar instructions by reference to other aids and be reminded that radar control does not relieve them of their responsibility to ensure adequate terrain clearance.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. If the specified minimum altitude for a sector is related only to terrain or obstacles within less than 20 NM. of the intended track, special attention must be drawn to the fact in manuals and prepared navigational flight plans supplied to flight crew.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For flights within 20 NM. of terrain having an elevation exceeding 2,000 feet, operations manuals should provide for minimum altitude to be increased by at least the following amounts according to the wind speed at flight level.

**Wind speed in knots**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Elevation of terrain* | *0-30* | *31-50* | *51-70* | *Over 70* |
| *2,000 - 8,000 ft* | *500 ft* | *1,000 ft* | *1,500 ft* | *2,000 ft* |
| *Above 8,000 ft* | *1,000 ft* | *1,500 ft* | *2,000 ft* | *2,500 ft* |

 | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.6 The manual should also include a reference to the effect of mountain waves and instruct pilots-in-command to take suitable precautions when such conditions are reported or forecast.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.7 Minimum altitude should be related where necessary to the ability of the aircraft to comply with the Weight and Performance requirements. i.e. all engines operating, single engine failure for 2 engine aircraft, 1 or 2 engine failure for 3 or 4 engine aircraft.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.8 If an operator wishes to use the minimum safe altitudes provided in a recognised Flight Guide (Aerads, Jeppesen or any charts that are approved by the Authority) he/she must first check that the basis of the publisher’s calculations will give at least an equal standard to that required by the above paragraphs. It may be necessary to promulgate a correction in the manual so that the required standard is achieved.  | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **13 AERODROME OPERATING MINIMA** |
| 13.1 It is operator requirement to establish aerodrome operating minima for each aerodrome to be used in operation. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.2 The operator shall establish and document in the Operations Manual aerodrome operating minima for each aerodrome to be used in operations using the Authority approved method of determination of such minima. When specifying the Aerodrome Operating Minima, the operator shall not specify values lower than the appropriate values as specified by the State of aerodrome, except when specifically approved by that State. Operational credit(s) for aeroplanes equipped with automatic landing systems, HUD or equivalent displays, EVS, SVS or CVS shall be authorized by the authority. Where the operational credit relates to low visibility operations, the operator shall obtain a specific approval from the authority. Such shall not affect the classification of the instrument approach procedure. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.3 In establishing the aerodrome operating minima which will apply to any particular operation, the operator shall take into full account the following: |  |
| 1. The type, performance and handling characteristics of the aeroplane and any conditions or limitations stated in the flight manual;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The composition of the flight crew, their experience and competence;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The dimension and characteristic of the runway which may be selected for use;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The adequacy and performance of available visual and non-visual ground aids;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The equipment available on the aeroplane for the purpose of navigation and/or control of flight path during the approach to landing and the missed approach;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The obstacle in the approach and missed approach areas and the obstacle altitude/height for the instrument approach procedures;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The means used to determine and report meteorological conditions; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The obstacles in the climb-out areas and necessary clearance margin.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The conditions prescribed in the operations specifications; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Any minima that may be promulgated by the state of the aerodrome.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Guidance on the establishment of aerodrome operating minima is contained in the Manual of All-Weather Operations (Doc 9365) and CAAT guidance material “ALL WEATHER OPERATIONS”* | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.4 Instrument approach operations shall be classified based on the designed lowest operating minima below which an approach operation shall only be continued with the required visual reference as follows: |  |
| 1. Type A: a minimum descent height or decision height above 75 m (250 ft); and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Type B: a decision height below 75 m (250 ft). Type B instrument approach operations are categorized as
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Category I (CAT I): a decision height not lower than 60 m (200 ft) and with either a visibility not less than 800 m or a runway visual range not less than 550 m;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Category II (CAT II): a decision height lower than 60 m (200 ft), but not lower than 30 m (100 ft) and a runway visual range not less than 300 m;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Category IIIA (CAT IIIA): a decision height lower than 30 m (100 ft) or no decision height and a runway visual range not less than 175 m;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 1:*** *Where decision height (DH) and runway visual range (RVR) fall into different categories of operation, the instrument approach operations would be conducted in accordance with the requirements of the most demanding category (e.g. an operation with a DH in the range of CAT III but with an RVR in the range of CAT III would be considered a CAT III operation or an operation with a DH in the range of CAT II but with an RVR in the range of CAT I would be considered a CAT II operation). This does not apply if the RVR and/or DH has been approved as operational credits.* | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 2****: The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path, In the case of circling approach operation the required visual reference is the runway environment.*  | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 3:*** *Guidance on approach classification as it relates to instrument approach operations, procedures, runways and navigation systems are contained in the All-Weather Operations Manual (Doc 9365)* | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.5 An instrument approach operation should not be authorised, when the aerodrome operating minima is below 800 m visibility unless RVR information is provided. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.6 The operator shall not conduct instrument approach operations in low visibility which shall only be conducted when RVR information is provided unless specific approval by the Authority is obtained. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.7 For take-off in low visibility, the operator shall obtain specific approval for the minimum take-off RVR from the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.8 The operating minima for 2D instrument approach operations using instrument approach procedures shall be determined by establishing a minimum descent altitude (MDA) or minimum descent height (MDH), minimum visibility and, cloud conditions. | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *For guidance on applying a continuous descent final approach flight technique on non-precision approach procedures refer to PANS-OPS (Doc 8168) Volume I, Section 1.7.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.9 The operating minima for 3D instrument approach operations using instrument approach procedures shall be determined by establishing a decision altitude (DA) or decision height (DH) and the minimum visibility or RVR. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.10 Operations with lower visibilities than normally associated with the aerodrome operating minima may only be allowed on aircraft with HUD and/or EVS if approval has been obtained in accordance with paragraph 13.27.2. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.11 Threshold crossing height for 3D instrument approach operations  |  |
| 13.11.1 An operator shall establish operational procedures designed to ensure that an aeroplane being used to conduct 3D instrument approach operations crosses the threshold by a safe margin, with the aeroplane in the landing configuration and attitude. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.12 The Operations Manual instructions must comply with the relevant regulations and any mandatory operating minima which foreign countries may apply or authorise.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.13 A flight shall not be continued towards the aerodrome of intended landing, unless the latest available information indicates that at the expected time of arrival, a landing can be affected at the aerodrome or at least one destination alternate aerodrome, in compliance with the operating minima established in accordance with paragraph 13.1. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.14 Minima and associated instructions must be related as necessary to particular types of aircraft, and must be tabulated or otherwise presented in a manner that will facilitate immediate reference on the flight deck. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.15 Runways (or landing strips) and approach aids which are not to be used (e.g. because the runway is too short) must be clearly indicated. This may be done in the operator’s weather minima tables or by a general instruction prohibiting the use of runways or aids which are not included in the tables. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.16 For guidance of pilots-in-command who may be obliged in exceptional circumstances to land at aerodrome for which values have not been specified, operators should include in the Operations Manual the data and instructions by means of which minima appropriate to the circumstances can readily be calculated. The guidance given should be sufficient to enable the pilot-in-command to determine all the values that would normally have been specified by the operator including, in particular, the minima appropriate to visual manoeuvring for landing. When a pilot-in-command calculates the Aerodrome Operating Minima (AOM) in accordance with these criteria the calculations should be retained with other flight documentation. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.17 Operations with lower visibilities than normally associated with the aerodrome operating minima may only be allowed on aircraft with HUD and/or EVS if approval has been obtained in accordance with paragraph 13.28. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.18 Selection of Alternate Aerodrome An operator shall establish procedures in the Operations Manual or in the flight brief for the pilot-in-command for the selection of destination and/or alternate aerodromes in accordance with 13.18.2 when planning a flight. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.18.1 Take-off Alternate Aerodrome |  |
|  An operator shall select and specify a take-off alternate aerodrome in the operational flight plan if either the meteorological conditions at the aerodrome of departure are below the operator’s established aerodrome landing minima for that operation or if it would not be possible to return to the aerodrome of departure for other reasons. The take-off alternate aerodrome shall be located within the following flight time distance from the aerodrome of departure: |  |
| 1. For aeroplanes with two engines, one hour of flight time at a one-enginein operative cruising speed, determined from the aircraft operating manual, calculated in ISA and still-air conditions using the actual take-off mass; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For aeroplanes with three or more engines, two hours of flight time at an allengine operating cruising speed, determined from the aircraft operating manual, calculated in ISA and still-air conditions using the actual take-off mass; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For aeroplanes engaged in extended diversion time operations (EDTO) where an alternate aerodrome meeting the distance criteria of (a) or (b) is not available, the first available alternate aerodrome located within the distance of the operator’s approved maximum diversion time considering the actual take-off mass.
 | Click or tap here to enter text. | Click or tap here to enter text. |
|  For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will be at or above the operator’s established aerodrome operating minima for that operation.  | Click or tap here to enter text. | Click or tap here to enter text. |
|  Operators using Category II or Category III equipped aircraft should, at the flight planning stage consider the possibility of equipment malfunction, and ensure that the weather at the alternate aerodrome is Category I or better. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.18.2 En-route alternate aerodrome |  |
|  En-route alternate aerodromes required by paragraph 20 in this Chapter for extended diversion time operations by aeroplanes with two turbine engines, shall be selected and specified in the operational and air traffic services (ATS) flight plans.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.18.3 Destination alternate aerodrome  |  |  |
|  For a flight to be conducted in accordance with the instrument flight rules, the operator shall select and specify at least one destination alternate aerodrome in the operational and ATS flight plans, unless:  | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The duration of the flight from the departure aerodrome, or from the point of inflight re-planning to the destination aerodrome is such that, taking into account all meteorological conditions and operational information relevant to the flight, at the estimated time of use, a certainty exists that:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The approach and landing may be made under visual meteorological conditions; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Separate runways are usable at the estimated time of use of the destination aerodrome with at least one runway having an operational flight instrument approach procedure; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The aerodrome is isolated. Operations into isolated aerodromes do not require the selection of a destination alternate aerodrome(s) and shall be planned in accordance with paragraph 6.5 in this Chapter, plus contingency fuel of 5%.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For each flight into an isolated aerodrome a point of no return shall be determined; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. A flight to be conducted to an isolated aerodrome shall not be continued past the point of no return unless a current assessment of meteorological conditions, traffic, and other operational conditions indicate that a safe landing can be made at the estimated time of use.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 1:*** *Separate runways are two or more runways at the same aerodrome configured such that if one runway is closed, operations to the other runway(s) can be conducted.*  | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 2:*** *Guidance on planning operations to isolated aerodromes is contained in the Flight Planning and Fuel Management Manual (Doc 9976).*  | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.18.4 The operator shall select and specify two destination alternate aerodromes in the operational and ATS flight plans when, for the destination aerodrome:  | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Meteorological conditions at the estimated time of use will be below the operator’s established aerodrome operating minima for that operation; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Meteorological information is not available.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.19 Notwithstanding the provisions in 13.18.1, 13.18.2, and 13.18.3; the Authority may, based on the results of a specific safety risk assessment conducted by the operator which demonstrates how an equivalent level of safety will be maintained, approve operational variations to alternate aerodrome selection criteria. The specific safety risk assessment shall include at least the: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Capabilities of the operator;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Overall capability of the aeroplane and its systems;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Available aerodrome technologies, capabilities and infrastructure;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Quality and reliability of meteorological information;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Identified hazards and safety risks associated with each alternate aerodrome variation; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Specific mitigation measures.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Guidance on performing a safety risk assessment and on determining variations, including examples of variations, are contained in the Flight Planning and Fuel Management Manual (Doc 9976) and the Safety Management Manual (SMM) (Doc 9859).* | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.20 Meteorological conditions |  |  |
|  A flight to be conducted in accordance with VFR must not be commenced unlesscurrent meteorological reports or a combination of current reports and forecasts indicatethat the meteorological conditions along the route or that part of the route to be flown under VFR will, at the appropriate time, be such as to enable compliance with these rules. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.20.1 A flight to be conducted in accordance with the instrument flight rules shall not: |  |
| 1. Take off from the departure aerodrome unless the meteorological conditions, at the time of use, are at or above the operator’s established aerodrome operating minima for that operation; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Take off or continue beyond the point of in-flight re-planning unless at the aerodrome of intended landing or at each alternate aerodrome to be selected in compliance with paragraph 13.7 current meteorological reports or a combination of current reports and forecasts indicate that the meteorological conditions will be, at the estimated time of use, at or above the operator’s established aerodrome operating minima for that operations.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.20.2 To ensure that an adequate margin of safety is observed in determining whether or not an approach and landing can be safely carried out at each alternate aerodrome, the operator shall specify appropriate incremental values for height of cloud base and visibility, acceptable to the Authority, to be added to the operator’s established aerodrome operating minima. | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Guidance on the selection of these incremental values can be found in the Flight Planning and Fuel Management (FPFM) Manual (Doc 9976).* | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.20.3 An acceptable time margin used by the Authority is one hour before and after earliest and latest time of arrival. This may be reduced in special circumstances, e.g. if the meteorological forecast is only valid for the time of operation of the aerodrome and does not cover the period before opening. A margin of time established by the operator for the estimated time of use of an aerodrome shall be Authorised by the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Guidance on establishing an appropriate margin of time for the estimated time of use of an aerodrome can be found in the Flight Planning and Fuel Management (FPFM) Manual (Doc 9976).* | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.21 Take-off Minima |  |
|  Minima condition for take-off must be specified in terms of cloud ceiling and the runway visual range or visibility as appropriate. Full account should be taken of the factors in the GM for AWO in particular the nature and position of runway lights and/or markings, the take-off run and emergency distance available, runway width and the directional controllability of the aircraft particularly in case of engine failure. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.22 Special rules applicable to certain types of aircraft  |  |
|  Certain classes of aircraft which are less well equipped and/or have a limited engine-out performance capability will need to operate to higher weather minima. Such minima shall be submitted to the Authority for approval. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.23 Landing Minima |  |  |
|  Decision height/altitude (DH, DA) or minimum descent height/altitude (MDH, MDA) and Runway Visual Range (RVR) and/or visibility must be specified for each runway or landing strip and approach aid to be used. Crew must be instructed: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Not to continue an approach below 300m (1000ft) above the aerodrome elevation or into the final approach segment unless the reported or controlling RVR is at or above the specified value;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. If, after entering the final approach segment or after descending below 300m (1000ft) above the aerodrome elevation the reported visibility or controlling RVR falls below the specified minimum, the approach may be continued to DA/H or MDA/H;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. To initiate a missed approach if the approach and landing from DH/DA or MDA/DH cannot be completed entirely by visual reference to the ground (see Note 2 in paragraph 13.4 of this Chapter); and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. That the procedure should ensure that the aircraft conducting a precision approach crosses the threshold by a safe margin in a landing configuration and attitude.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.24 Aerodrome Operating Minima |  |  |
|  In deciding the values to be specified, operators shall be guided by the factors in the appropriate guidance material i.e. GM for AWO. They must also take into account all the relevant limitations notified by the appropriate aerodrome authority. Any altimeter system, and the amount of sink following initiation of a missed approach must be allowed for. The minimum acceptable RVR is related to decision height and to visual approach and runway aids. When specifying Aerodrome Operating Minima as required by the Authority Requirement, operators should not specify values of Runway Visual Range for Category I operations lower than the appropriate values. Operators may use either the services provider accepted by the authority e.g. Jeppesen, AERAD or any charts that are approved by the Authority. The minimums specified in these charts should not be lower than that specified by the respective states that they operate into the following is an example of the RVR related to decision height and approach lighting available for aeroplanes exceeding 5,700 kg MTOW***Figure 1 Aerodrome Operating Minima*** | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.24.1 Operators must specify increments to be applied to the normal specified values in the event of any unserviceability of engine, system or instrumentation which significantly affects the performance and/ or handling of the aircraft. Operators should also consider specifying increments to be applied by pilots- in- command with limited experience. All approaches should be conducted according to a stabilised approach procedure. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.25 Minima for Visual Maneuvering for Landing |  |  |
|  Minima for visual manoeuvring for landing (circling minima) must be established by the operator for each aerodrome to be used. These minima shall consist of a minimum circling height and a minimum visibility. They would apply, for example, where a pilot used a radio aid to position himself in sight of the aerodrome and then made a partial circuit (or other significant manoeuvre) to line-up for the approach and landing.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.25.1 The minimum height for circling should be determined by reference to the relevant chart or AIP and account must be taken of obstacles and terrain within the appropriate radius of the centre of the aerodrome. The radius used must be indicated in the manual.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.25.2 At some aerodromes, it will be necessary to restrict circling to a particular area of the circuit - e.g. “north of the extended centreline only”- because of major obstacles or high ground in the vicinity. Any such restriction must be clearly indicated in the lists of operating minima.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.25.3 For a visual circuit of the aerodrome based on visual manoeuvring minima, a pilot should have continuous sight of ground features which will enable him to establish the position of the aircraft in relation to the aerodrome and subsequently to remain within the notified visual manoeuvring area.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.26 In approving the operational use of automatic landing systems, a HUD or equivalent displays, EVS, SVS or CVS, the State of the Operator shall ensure that: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The equipment meets the appropriate airworthiness certification requirements;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The operator has carried out a safety risk assessment of the operations supported by the automatic landing systems, a HUD or equivalent displays, EVS, SVS or CVS;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The operator has established and documented the procedures for the use of, and training requirements for, automatic landing systems, a HUD or equivalent displays, EVS, SVS or CVS.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.27 Aerodromes without Approach Aids  |  |
|  As a general rule for public transport aircraft carrying passengers, flights to aerodrome without a radio or radar approach aid are prohibited. This should be brought especially to the attention of crew in operations manuals. In exceptional circumstances flights to such aerodromes may be specially permitted, and suitable aerodrome operating minima, together with associated operating procedures, will be agreed with the operator.  | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Material concerning the methods for determining aerodrome operating minima can be found in All Weather Operations Manual (Doc 9365).* |  |  |
| 13.28 Instrument Flight Procedures |  |
|  One or more instrument approach procedures designed to support instrument approach operations shall be approved and promulgated by the State in which the aerodrome is located to serve each instrument runway or aerodrome utilized for instrument flight operations. | Click or tap here to enter text. | Click or tap here to enter text. |
| 13.28.1 All aeroplanes operated in accordance with instrument flight rules shall comply with the instrument flight procedures approved by the State in which the aerodrome is located. | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note1:***See *13.4 for instrument approach operation classifications*. | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note2:*** *Information for pilots on flight procedure parameters and operational procedures can be found in PANS-OPS (Doc 8168), Volume I. Criteria for the construction of instrument flight procedures for the guidance of procedure* specialists *can be found in PANS-OPS (Doc 8168), Volume II. Obstacle clearance criteria and procedures used in certain States may differ from PANS-OPS, and knowledge of these differences is important for safety reasons (see Chapter 5, 8.4).* | Click or tap here to enter text. | Click or tap here to enter text. |

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| **14 EMERGENCY EVACUATION PROCEDURES** |
| 14.1 The manual should specify the procedures to be followed by the aircraft crew for the rapid evacuation of an aircraft, and the care of passengers, in the event of a forced landing, ditching or other emergency. Much of the material will necessarily be descriptive but it is essential that the basic drills to be followed by the various members of the aircraft crew should be summarised and tabulated. Particular attention should be paid to the following points:  |  |
| 1. The correct setting for pressurisation controls - e.g. spill valves, safety valves, and discharge valves - prior to ditching;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The proper use of emergency escape slide equipment;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The method of fitting life-jackets to small children;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The briefing of passengers and warning of impact;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The seating of aircraft crew members adjacent to exits which drills require them to open;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Crowd control (particularly in relation to aircraft capable of carrying large numbers of passengers) including procedures for initiating and maintaining the rapid egress of passengers in the event of an emergency evacuation;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The need to move passengers away from the vicinity of the aircraft after evacuation.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 14.2 Clear instructions should be given in the manual (supplemented by simple diagrams) on the location and, where it is not self-evident, the method of use of each item of emergency and survival equipment such as escape chutes and ropes, exits, fire extinguishers, oxygen masks and smoke protection equipment, emergency lights, torches, first aid kits, dinghies, life-jackets, survival packs, emergency radio, and flotation cots. It is especially important that differences between individual aircraft of the same type are clearly shown.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 14.3 Special consideration should be given to the problems posed by the carriage of disabled passengers and the possible need to carry additional cabin crew. The piloting-command should be made aware of the presence of severely disabled persons on board, and of the precautions taken to minimise the effect of their carriage on the conduct of an emergency evacuation of the aircraft.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 14.4 Operators should ensure that there are satisfactory arrangements for cabin crew to be warned immediately of any emergency which might require the rapid evacuation of passengers from the aircraft.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 14.5 To improve the chances of a successful evacuation, operators should back up the cabin crew briefing by paying special attention to the individual passenger notice cards, required by the CAAT Regulations. It should be in colour, and pictorial, giving simply and unambiguously: | Click or tap here to enter text. |
| 1. Instructions on the method of use of safety belts and harnesses;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Instructions on the brace position to be adopted in the event of an emergency landing;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Information as to where emergency exits are to be found and how to use them; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Information on where life-jackets, escape slides, life rafts, oxygen masks are to be found and how to use them.
 | Click or tap here to enter text. | Click or tap here to enter text. |

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| **15 ALLOWABLE DEFICIENCIES**  |
| 15.1 The operator shall provide guidance to pilots-in-command on whether and on what conditions aircraft may be operated with defect not rectified. The minimum equipment list for all specific operations including any requirements relating to operations in All Weather Operations (CAT II and CAT III), RNP, RNAV, MNPS, RVSM, EDTO ETOPS and CNS/ATM airspace and any other special operation requirements shall be submitted to the Authority for approval.  | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Further details and references on RNP/RNAV, MNPS and RVSM can be found in the following ICAO Document:* 1. *RNP/RNAV - ICAO Doc 9613 (PBN);*
2. *MNPS - NATS MNPS (North Atlantic MNPS Airspace Operations Manual); and*
3. *RVSM - ICAO Doc 9574.*
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 15.2 When the carriage of unserviceable equipment results in a deviation from the normal drills, satisfactory alternative drills must be included in the manual. It is important, when items such as spoilers or thrust reversers are listed as allowable deficiencies that the operator not only publishes alternative drills, but also checks with the Authority on the validity of relevant performance data.  | Click or tap here to enter text. | Click or tap here to enter text. |

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| **16 USE AND CHECKING OF ALTIMETERS** |
| 16.1 Operators should provide detailed instructions in their operations manuals about altimeter setting procedures and in particular, about their policy regarding the use of QFE and QNH.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 16.2 The instructions should include pre-flight serviceability checks, the settings to be used on each altimeter for each phase of flight, and the monitoring and crosschecking duties of flight crew during climb and descent and whenever a setting is changed.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 16.3 In order to facilitate effective monitoring during the approach and landing phase in aircraft operated by two pilots, the Authority requires that both pilots’ altimeters be set to the same datum unless otherwise approved by the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| 16.4 Altimeters Procedure |  |  |
| 16.4.1 This procedure is intended to assist the operator in preparing instructions relating to the proper use of all altimeters on the aircraft flight deck. It applies mainly to multicrew operations, but can, with few exceptions, be applied to single-pilot operations. It is for the operator to determine its own policy in using QNH or QFE for landing; this policy should be reflected in the instructions and procedures which should be clear, positive and consistent. | Click or tap here to enter text. | Click or tap here to enter text. |
| 16.4.2 Instructions should cover all stages of the operation of the aircraft, both before and during flight. A company’s basic policy should be accurately reflected in its check lists, and take account of the following: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Pre-flight serviceability tests
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The settings to be made on each altimeter on the flight deck prior to take-off and at each stage of the flight.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. During the approach phase a check of airfield height is required; a cross check of airfield height against the difference between the QFE and QNH settings should also be made when QFE is used for landing.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Additional instructions should be included on the following (where appropriate to the basic policy):
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The procedure for indicating decision heights for landing; this might range from a figure in the navigation log to altimeter bugs and/or separate “landing data cards”;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The settings and procedures to be adopted when QFE is not available or cannot for some reason be used by an aircraft when a company’s normal policy is to use QFE;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The manner of checking and of the use of any non-pressure altimeter(s);
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The provision of appropriate procedures if an altimeter becomes unserviceable in flight, and also the conditions to be met if this is a pre-flight allowable deficiency; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The manner of setting the altimeters, when the take-off or landing is carried out from the co-pilot’s seat. Unless there are good reasons for doing otherwise, operators should not vary their normal policy.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Neither in the policy statement nor in the check lists is it sufficient for the word “set” to be used. The setting required by the operator should be clearly stated in respect of each altimeter concerned, including any “standby” altimeter.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 16.4.3 The following matters should also be covered in the operations manual: |  |  |
| 1. The calls to be made by the monitoring pilots during instrument approaches, e.g. at the outer marker and at 100 ft. above decision height or thereabouts. In the case of Category II and III weather minima approaches, the appropriate calls and responses will need to be stated in some detail;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Correct reporting of height changes to ATC: it should be particularly noted that the report should not be made before arriving at or before leaving the particular altitude/level;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Provision of one altimeter to be set to an appropriate QNH setting when flying at or near to the Minima Safe Altitude (particularly for unpressurised single crew aircraft) would be a prudent precaution;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Cross checking of altimeters at appropriate intervals by all flight deck crew during climb and descent;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Instructions requiring the Co-Pilot to advise the Pilot-in-Command that he/she is approaching the assigned altitude or level;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. An instruction requiring the crew to inform ATC, prior to commencement of a radar approach, of the intention to use QNH settings throughout the procedure; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Procedures for use of Altitude Alert Systems, if fitted.
 | Click or tap here to enter text. | Click or tap here to enter text. |

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| **17 REPORTING OF ACCIDENTS, INCIDENTS AND OCCURRENCES** |
| 17.1 Operators and pilots-in-command of Thai registered aircraft are required to report any accidents, incidents or occurrences which endangers, or unless corrected would have endangered the flight crew and passengers and aircraft. The list of reportable occurrences and the applicable reporting timelines are set out in The Civil Aviation Authority of Thailand Requirement No. 22/2562: “Reporting of Civil Aviation Occurrences”. The manual should remind personnel of their responsibilities in this regard and state the company procedure for dealing with such reports. | Click or tap here to enter text. | Click or tap here to enter text. |
| 17.2 Pilots-in-command are to report any hazardous conditions, other than those associated with meteorological conditions, to the appropriate aeronautical station as soon as possible. The reports so rendered shall give such details as may be pertinent to the safety of other aircraft.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 17.3 The pilot-in-command shall be responsible for reporting all known or suspected defect in the aircraft to the operator at the termination of the flight. | Click or tap here to enter text. | Click or tap here to enter text. |
| 17.4 As of 4th November 2021, the pilot-in-command shall report the runway breaking action special airreport (AIREP) when the runway breaking action encountered is not as good as reported.***Note:*** *The Procedures for making special air-reports regarding runway breaking action are contained in the PANS-ATM (Doc 4444), Chapter 4 and Appendix I.* | Click or tap here to enter text. | Click or tap here to enter text. |

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| **18 DANGEROUS GOODS** |
| 18.1 The operations manual should indicate whether or not a general permission for the carriage of dangerous goods is held and what conditions apply to that permission. Operators who do carry dangerous good should also include in their operations manual information regarding the means of identifying dangerous goods, their manner of loading and the responsibilities of crew members concerning such goods. The conditions for the carriage of dangerous goods are covered in Chapter 3, paragraph 3 of this document. | Click or tap here to enter text. | Click or tap here to enter text. |
| 18.2 Operators who do not seek permission to carry dangerous goods must prohibit their carriage by an entry in the operations manual, and give guidance to staff and agents concerning which goods may not be carried. | Click or tap here to enter text. | Click or tap here to enter text. |

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| **19 GROUND HANDLING AND AIRCRAFT DISPATCH** |
| 19.1 Operators are responsible for the safe dispatch of their aircraft following cargo and passenger loading, refuelling, cleaning, catering and the completion of pre-flight maintenance and servicing. Any damage to the aircraft must be reported and assessed for airworthiness significance prior to flight.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 19.2 Instructions must be given to ensure that dispatch tasks are carried out in a standard manner, that each task is fully and correctly completed, and that any damage is reported immediately. | Click or tap here to enter text. | Click or tap here to enter text. |
| 19.3 Instructions on training requirements, subcontracting policies, handling and loading/unloading processes, SOP and practices for all ground handling operations should be developed in accordance with the IATA Ground Operations Manual and IATA Airport Handling Manual. | Click or tap here to enter text. | Click or tap here to enter text. |
| 19.4 Where dispatch tasks and ground handling tasks are contracted out to other organisations, contracts must include the operator’s requirements for safe conduct of the task and the performance of the contractor, in respect of safety, must be monitored regularly. Even when all or part of the functions and tasks have been contracted to contractor, operators' ground handling responsibility must be permanently maintained. | Click or tap here to enter text. | Click or tap here to enter text. |

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| **20 OPERATIONS BEYOND 60 MINUTES TO AN EN-ROUTE ALTERNATE AERODROME** |
| 20.1 All operators conducting operations beyond 60 minutes from a point on a route to an en-route alternate aerodrome shall ensure that: | Click or tap here to enter text. |
| 1. For all aeroplanes:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. En-route alternate aerodromes are identified; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The most up-to-date information is provided to the flight crew on identified en-route alternate aerodromes, including operational status and meteorological conditions; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The operation meets any other requirements that the Authority may stipulate from time to time.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For aeroplanes with two turbine engines, the most up-to-date information provided to the flight crew indicates that conditions at identified en-route alternate aerodromes will be at or above the operator’s established aerodrome operating minima for the operation at the estimated time of use.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 20.2 In addition to 20.1, operators shall ensure that the following are taken into account and provide the overall level of safety acceptable to the Authority: |  |
| 1. Operational control and flight dispatch procedures;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Operating procedures; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Rraining programmes
 | Click or tap here to enter text. | Click or tap here to enter text. |

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| **21 AEROPLANE OPERTING PROCEDURES FOR LANDING PERFORMANCE** |
| 21.1 As of 4th November 2021, an approach to land shall not be continued below 300 m (1000 ft) above aerodrome elevation unless the pilot-in-command is satisfied that, with the runway surface condition information available, the aeroplane performance information indicates that a safe landing can be made. | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 1:*** *The procedures used by aerodromes to assess and report runway surface conditions are contained in the PANS-Aerodromes (Doc 9981) and those for using runway surface condition information on board aircraft are in the Aeroplane Performance Manual (Doc 10064).* | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 2:*** *Guidance on development of aeroplane performance information is contained in the Aeroplane Performance Manual (Doc 10064).* | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **22 EXTENDED DIVERSION TIME OPERATIONS (EDTO)** |
| 22.1 Unless the operation has been specifically approved by the Authority, an aeroplane with two or more turbine engines shall not, be operated on a route where the diversion time from any point on the route to an en-route alternate aerodrome exceeds threshold time of: |  |
| 1. 60 minutes for aeroplanes with two turbine engines; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 180 minutes for aeroplanes with more than two turbine engines
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 1:*** *When the diversion time exceeds the threshold time, the operation is considered to be an extended diversion time operation (EDTO).*  | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 2:*** *For the purpose of EDTO, the take-off and/or destination aerodromes may be considered en-route alternate aerodromes.*  | Click or tap here to enter text. | Click or tap here to enter text. |
| 22.2 On issuing the specific approval for extended diversion time operations, the maximum diversion time granted to the operator for each particular aeroplane and engine combination shall be specified by the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| 22.3 An operator seeking maximum diversion time for a particular aeroplane type to engage in extended diversion time operations from the Authority, besides satisfying the requirements in paragraph 22.1, shall also ensure that: |  |
| 1. For all aeroplanes: the most limiting EDTO significant system time limitation, if any, indicated in the Aeroplane Flight Manual (directly or by reference) and relevant to that particular operation is not exceeded; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For aeroplanes with two turbine engines: the aeroplane is EDTO certified.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 22.4 Notwithstanding the provisions in 22.3 (a); the Authority may, based on the results of a specific safety risk assessment conducted by the operator which demonstrates how an equivalent level of safety will be maintained, approve operations beyond the time limits of the most time-limited system. The specific safety risk assessment shall include at least the: |  |
| 1. Capabilities of the operator;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Overall reliability of the aeroplane;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Reliability of each time limited system;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Relevant information from the aeroplane manufacturer; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Specific mitigation measures.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 22.5 For aeroplanes engaged in EDTO, the additional fuel required by 6.2.2 (b) shall include the fuel necessary to comply with the EDTO critical fuel scenario as established by the Authority.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 22.6 A flight shall not proceed beyond the threshold time in accordance with paragraph 20.1 unless the identified en-route alternate aerodromes have been re-evaluated for availability and the most up to date information indicates that, during the estimated time of use, conditions at those aerodromes will be at or above the operator’s established aerodrome operating minima for the operation. If any conditions are identified that would preclude a safe approach and landing at that aerodrome during the estimated time of use, an alternative course of action shall be determined.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 22.7 An operator approved to conduct operations where the diversion time is beyond the threshold time, shall ensure that the following are taken into account in providing the overall level of safety intended by the provisions of Thailand Airworthiness Requirements: |  |
| 1. Reliability of the propulsion system;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Airworthiness certification for EDTO of the aeroplane type; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. EDTO maintenance programme.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 1****: EDTO may be referred to as ETOPS in some documents.* | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 2****: Additional guidance is provided via Guidance Material for EDTO (GM for EDTO).* | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 3****: Guidance on the level of performance and reliability of aeroplane systems as well as guidance on continuing airworthiness aspects can be found in the Airworthiness Manual (Doc 9760).* | Click or tap here to enter text. | Click or tap here to enter text. |
| 22.8 Any ETOPS approval previously granted by the Authority will continue be valid unless varied, suspended, cancelled or revoked. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **23 MIXED FLEET FLYING OPERATIONS (MFF)** **DEFINITIONS** |
| 1. **Mixed Fleet Flying (MFF)**

The operation of Primary MFF Aircraft and Secondary MFF Aircraft by a CAAT AOC holder. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. **Primary MFF Aircraft**

An Aircraft, or group of Aircraft, designated by a CAAT AOC holder and used as a reference to compare differences with the Secondary MFF Aeroplane within the operator’s fleet. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. **Secondary MFF Aircraft**

An Aircraft, or group of Aircraft s, of a different type or variant from the Primary MFF Aircraft. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. **Variant**

An Aircraft, or a group of Aircraft s, that has the same characteristics as the Primary MFF Aircraft but is different from the Primary MFF Aircraft such that additional flight crew knowledge, skills and/or abilities are required in order to operate it. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.1 General |  |
| 23.1.1 An operator who intends to commence Mixed Fleet Flying (MFF) operations shall apply for approval from the Authority. The Authority, when satisfied that the operator meets the requirements, may approve the MFF application with or without conditions imposed. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.1.2 An application under paragraph 23.1.1 shall be accompanied by the following documents: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Assessment by the manufacturer on the suitability of the Aircraft type(s) to be engaged in MFF;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. An MFF policy and supporting procedures; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. An MFF Programme including the Aircraft type(s) to be used for the Primary and Secondary MFF Aircraft.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.1.3 An operator who is approved to conduct MFF operations shall only use a Secondary MFF Aircraft that is approved by the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.1.4 The operator shall conduct the MFF operations in accordance with the approval granted by the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.1.5 The MFF Policy and Programme shall be documented in the Operations Manual and/or Training Manual. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.2 Pre-Requisites for MFF Operation - Pilot Qualification |  |
|  The operator shall ensure that each pilot: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Has completed at least two consecutive Proficiency checks;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Has at least 500 total flying hours in the relevant crew position; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Has at least 3 months and 150 flying hours’ experience on the Primary MFF Aircraft, with the operator before he is inducted into the operator’s MFF Programmeใ
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.3 MFF Programme |  |
| 23.3.1 The operator’s MFF Programme shall describe the process for qualifying a pilot to become an MFF pilot. It shall encompass the following: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The necessary training to obtain an Aircraft type rating on Secondary MFF Aircraft;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. A Consolidation Period; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. MFF Indoctrination Training.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note****: While undergoing the MFF Programme, the pilot may continue to engage in commercial air transport and is subject to the requirement in Chapter 4, paragraph 1.8.2.* | Click or tap here to enter text. | Click or tap here to enter text. |
| **Consolidation Period** |  |
| 23.3.2 The operator shall ensure that the pilot accumulate sufficient operating experience on the Secondary MFF Aircraft during the Consolidation Period. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.3.3 The Consolidation Period shall, at the minimum, take into consideration the following factors: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The extent of differences between Primary MFF Aircraft and Secondary MFF Aircraft;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Recommendations by the aircraft manufacturer(s); and (c) experience of the operator.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| **MFF Indoctrination Training** |  |
| 23.3.4 The MFF Indoctrination Training shall be designed to equip the pilot with the necessary knowledge on MFF operations. This training shall be conducted either by qualified personnel or by any other means acceptable to the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.3.5 The operator shall ensure that the pilot complete his MFF Programme within 12 months of his last base check on the Primary MFF Aircraft. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.4 Operator’s Obligations for Pilot’s License Endorsement |  |
| 23.4.1 Before the pilot can seek endorsement on his license for MFF operation, the operator must ensure that the pilot holds valid and current Certificates of Test on both Primary and Secondary MFF Aircraft types. The operator must also provide evidence to show that the pilot meets the pre-requisites for MFF operation and has successfully completed the MFF Programme. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.5 Periodical Tests - MFF Pilots Proficiency Checks | Click or tap here to enter text. |
| **Proficiency Checks** |  |
| 23.5.1 The operator shall ensure that each MFF pilot complete at least two proficiency checks within the period of 12 months immediately preceding any commercial flight, with such checks being separated by an interval of not less than 4 months. The first base check to be conducted after the completion of the MFF Programme shall be on the Aircraft type of the next expiring base check. Subsequent base checks shall alternate between Primary MFF Aircraft and Secondary MFF Aircraft. | Click or tap here to enter text. | Click or tap here to enter text. |
| **Line Checks** |  |
| 23.5.2 The operator shall ensure that each MFF pilot complete one line check within the period of 12 months immediately preceding any commercial flight. The first line check to be conducted after the completion of the MFF Programme shall be on the Aircraft type of the next expiring line check. Subsequent line checks shall alternate between Primary MFF Aircraft and Secondary MFF Aircraft. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.5.3 In the event the base or line check on the Primary MFF Aircraft or Secondary MFF Aircraft lapses, or a pilot failed the check, the operator shall not allow the pilot to carry out his flying duties. The pilot may carry out his flying duties when the particular base or line check on the lapsed or failed Aircraft type is renewed or revalidated. | Click or tap here to enter text. | Click or tap here to enter text. |
| **MFF Recent Type Experience** |  |
| 23.5.4 The operator shall not assign a pilot to fly as an MFF Pilot-in-Command (PIC) unless he has carried out at least one take-off and one landing in either the Primary MFF Aircraft or Secondary MFF Aircraft during the previous 35 days period. Unless otherwise approved by the Authority, an MFF Pilot-in-Command or co-pilot shall, in the preceding 90 days, complete at least three take offs and three (3) landings, with at least one take-off and one landing in each of the Primary MFF Aircraft and Secondary MFF Aircraft. The take-off(s) and landing(s) can also be carried out in an approved flight simulator of the same type/class. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.5.5 When a cruise relief pilot is flying several variants of the same type of aircraft or different types of aircraft with similar characteristics in terms of operating procedures, systems, and handling, the recency or refresher training may be combined, if approved by the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.6 Cessations of MFF Operation by MFF Pilot |  |
| 23.6.1 The operator shall inform the Authority of any MFF pilot who no longer carry out his flying duties as an MFF pilot. | Click or tap here to enter text. | Click or tap here to enter text. |
| 23.7 Rostering MFF Pilots |  |
| 23.7.1 The operator shall not roster an MFF pilot to operate on both Primary MFF Aircraft and Secondary MFF Aircraft within the same day or Flight Duty Period. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **24 SPECIFIC APPROVAL** |
| 24.1 The term “specific approval” indicates a formal action on the part of the State of the Operator which results in an addition to the operations specification. | Click or tap here to enter text. | Click or tap here to enter text. |
| 24.2 The following provisions make explicit reference to the need for a specific approval: |  |
| 1. MNPS - Minimum Navigation Performance Specification;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. RVSM - Reduced Vertical Separation Minimum;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. PBN - Performance-based Navigation, including:
 | Click or tap here to enter text. |
| 1. RNAV - Area Navigation;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. RNP - Required Navigation Performance;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Baro VNAV;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. RNP AR
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note****: See CAAT Guidance Material for Performance Based Navigation (PBN)* |  | Click or tap here to enter text. |
| 1. Polar Routes;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Data-link including:
 | Click or tap here to enter text. |
| 1. CPDLC and ADS-C,
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. ADS-B.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. AWO - All Weather Operations;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Use of automatic landing systems, a HUD or equivalent displayed, EVS, SVS or CVS, or any combination of those systems into a hybrid system; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. ULR - Ultra Long Range flights; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. PBCS – Performance-based Communication and Surveillance.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *See CAAT Guidance Material for Performance-Based Communications and Surveillance (PBCS) Operational Approval.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 24.3 In addition; no specific approval shall be conducted, unless: |  |
| 1. The aircraft equipment is approved by the Authority;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The aircraft equipment is installed and maintained in a manner approved by the Authority;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The flight and ground crew are trained in accordance with policies and procedures approved by the Authority; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The aircraft is operated in compliance with the procedures and restrictions promulgated by the relevant authorities of the airspace in which the aircraft is flying.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 24.4 In addition to paragraph 24.3, an operator seeking Reduced Vertical Separation Minimum (RVSM) specific approval shall comply with the following requirements. | Click or tap here to enter text. | Click or tap here to enter text. |
| 24.4.1 Definitions |  |  |
| 1. Altimetry System Error (ASE) means the difference between the altitude indicated by the altimeter display, assuming a correct altimeter barometric setting, and the pressure altitude corresponding to the undisturbed ambient pressure.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Total Vertical Error (TVE) means the vertical geometric difference between the actual pressure altitude flown by an aircraft and its assigned pressure altitude (flight level).
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 24.4.2 Requirements |  |
| 1. To qualify for RVSM specific approval, an aeroplane shall be equipped in accordance with the Requirement outlined in the Authority Announcement on RVSM and associated Guidance Material;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The operator shall also comply with the airworthiness aspects of specific approval requirements set out in Chapter 11, paragraph 26 in this document; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The operator seeking RVSM specific approval shall also demonstrate to the satisfaction of the Authority that the vertical navigation performance capability of the aeroplane meets the Minimum Aircraft Systems Performance Specification (MASPS) requirements in paragraph 24.4.3 of this chapter.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 24.4.3 Minimum Aircraft Systems Performance Specification (MASPS) |  |  |
| 1. The altimetry system performance for operation in RVSM airspace in respect of groups of aeroplanes that are nominally of identical design and build with respect to all details that could influence the accuracy of height-keeping performance capability shall be such that the Total Vertical Error (TVE) for the group of aeroplanes shall have a mean no greater than 25 m (80ft) in magnitude and shall have a standard deviation no greater than 28 - 0.013Z2 for 0 ≤ Z ≤ 25 when Z is the magnitude of the mean TVE in metres, or 92 - 0.004Z2 for 0 ≤ Z ≤ 80 where Z is in feet;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. In addition, the components of TVE shall have the following characteristics:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The mean Altimetry System Error (ASE) of the group shall not exceed 25m (80ft) in magnitude;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The sum of the absolute value of the mean ASE and of three standard deviations of ASE shall not exceed 75 m (245ft); and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The differences between cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m (0ft), with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. In respect of aeroplanes for which the characteristics of the airframe and altimetry system fit are unique and so cannot be classified as belonging to a group of aeroplanes encompassed by item (a) and (b), the height-keeping performance capability shall be such that the components of the TVE of the aeroplane have the following characteristics:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The ASE of the aeroplane shall not exceed 60 m (200ft) in magnitude under all flight conditions; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The difference between the cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m (0ft), with a standard deviation no greater than 13.3 m (43.7ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 24.4.4 Continuing Compliance of MASPS |  |  |
| 1. The operator with RVSM specific approval shall set in place a programme to ensure that a minimum of two aeroplanes of each aeroplane-type grouping have their height-keeping performance monitored at least once every two years or within intervals of 1000 flight hours per aeroplane, whichever period is the longer; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. If the operator’s aeroplane-type grouping consists of a single aeroplane, monitoring of that aeroplane shall be accomplished within the specified period.

***Note:*** *CAAT Guidance Material for Reduced Vertical Separation Minimum (RVSM)* | Click or tap here to enter text. | Click or tap here to enter text. |
| 24.5 For operations where a navigation specification for Performance-Based Navigation (PBN) (i.e. Required Navigation Performance (RNP) or Area Navigation (RNAV)) specification has been prescribed, an aeroplane or a helicopter shall: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Be provided with navigation equipment which will enable it to operate in accordance with the prescribed navigation specifications; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Be authorised by the Authority for operations in such airspace.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *All operators requiring PBN approval shall apply to the Authority and refer to the guidance material for Performance-Based Navigation (PBN).* | Click or tap here to enter text. | Click or tap here to enter text. |
| 24.6 For flights in defined portions of airspace where, based on Regional Air Navigation Agreement, Minimum Navigation Performance Specification (MNPS) are prescribed, an aeroplane shall be provided with navigation equipment which: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Continuously provides indications to the flight crew of adherence to or departure from track to the required degree of accuracy at any point along that track; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Be authorised by the Authority for MNPS operations.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *The prescribed MNPS and the procedures governing their application can be found in the Regional Supplementary Procedures (Doc 7030) and those for the North Atlantic MNPS Airspace are in the current edition of the “Guidance concerning Air Navigation and above the North Atlantic MNPS Airspace” (NAT 007).* | Click or tap here to enter text. | Click or tap here to enter text. |
| 24.7 For operations in the conduct of instrument approach in low visibility, refer to Manual of All-Weather Operations ICAO Doc 9365 Chapter 6 and Guidance Material for All Weather Operations (AWO) for detailed requirements for the grant of specific approval. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **25 SECURITY PROGRAMME** |
| 25.1 The operator shall establish and implement a written security programme and shall ensure that such a programme meets the National Civil Aviation Security Programmes of CAAT. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **26 FLIGHT DECK SECURITY** |
| 26.1 In all aeroplanes which are equipped with a flight crew compartment door, this door shall be capable of being locked, and means shall be provide by which cabin crew can discreetly notify the flight crew in the event of suspicious activity or security breaches in the cabin. | Click or tap here to enter text. | Click or tap here to enter text. |
| 26.2 The operator shall not operate a passenger-carrying aeroplane with a maximum certificated take-off mass in excess of 54500 kg or aeroplane with maximum certificated take-off mass in excess of 45500 kg with passenger capacity greater than 19 or aeroplane with a passenger seating capacity greather than 60 unless it is equipped with an approved flight crew compartment door that is designed to resis penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorized persons. | Click or tap here to enter text. | Click or tap here to enter text. |
| 26.3 In all aeroplanes which are equipped with a flight deck door required by paragraph 26.2, means this door shall be capable of being locked and unlocked from either pilot’s station. | Click or tap here to enter text. | Click or tap here to enter text. |
| 26.4 The operator shall stipulate a policy for locking the door to be acknowledge and performed by flight crew members providing that the door in accordance with paragraph 26.2 shall be closed and locked form the time that the first passenger gets inside the aircraft to the time that the last passenger gets outside the aircraft, except when necessary to permit access or egress for the Authority or other authorised persons. | Click or tap here to enter text. | Click or tap here to enter text. |
| 26.5 The operator shall establish security measures of the flight crew compartment as follows; |  |
| 1. All aircraft which are equipped with a flight crew compartment door shall be provided with a measure to enable crew member to report suspicious behavior or potential threat to the security in the cabin to a flight crew member; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. All aircraft in accordance with paragraph 26.2 shall be provided with a measure to enable monitoring the entire area of the flight crew member outside the door form working area of each pilot to identify persons requesting entry and to detect suspicious behavior or potential threat.
 | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **27 ADMISSION TO THE FLIGHT DECK** |
| 27.1 The Pilot-in-command shall ensure that no person, other than a flight crew member assigned to a flight, is admitted to, or carried in, the flight deck unless the person is: |  |
| 1. A crew member in the performance of his or her duties;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. A competent official responsible for certification, licensing or inspection;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. A person required to be in the flight deck compartment for technical, operational, training, or official flight deck familiarisation reasons formally authorised in accordance with the operator’s Operations Manual; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Any other persons or classes of persons as approved by the Authority to be admitted to the flight deck. The list of such persons or classes of persons shall be included in the Operations Manual.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 27.2 The Pilot-in-command shall ensure that: |  |
| 1. In the interest of safety, admission into the flight deck does not cause distraction and/or interfere with the flight’s operation;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. All persons carried on the flight deck are made familiar with the relevant safety and security procedures.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 27.3 The final decision regarding the admission to the flight deck shall be the responsibility of the Pilot-in-command. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **28 CONTROL OF INFECTIOUS DISEASES** |
| 28.1 Operators must have written procedures and guidelines available to all operating staff for the handling of any outbreak of infectious diseases at destination(s) to which operate. | Click or tap here to enter text. | Click or tap here to enter text. |
| 28.2 Operators shall ensure that all operating staff are familiar with such procedures and guidelines related to the handling of outbreak of infectious diseases. | Click or tap here to enter text. | Click or tap here to enter text. |
| 28.3 The operator shall also include instruction for the pilot in command of an aircraft that a suspected communicable disease is reported promptly to the ATC in order to facilitiate provision for the presence of any special medical personnel and equipment necessary for the management of public health risks on arrival. The details shall include: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Aircraft identification;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Departure aerodrome;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Destination aerodrome;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Estimated time of arrival;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Number of persons on board;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Number of suspected case(s) on board; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Nature of the public health risk, if known.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 28.4 Operators shall ensure that all concerned operating staff are familiar with PANS ATM DOC 4444. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **29 AEROPLANE PERFORMANCE OPERATING LIMITATIONS** |
| **Requirements for Large Aeroplanes** |  |
| 29.1 This section (paragraphs 29.1 to 29.8) applies to aeroplanes certificated with maximum total weight authorised greater than 5,700 kg operated by the operator. | Click or tap here to enter text. | Click or tap here to enter text. |
| 29.2 The operator shall not permit a flight to be commenced unless the performance information provided in the flight manual, supplemented as necessary with other data acceptable to the Authority (including contaminated runway landing distance data, provided by the aeroplane manufacturer and acceptable to the Authority), indicates that the requirements of this section can be complied with for the flight to be undertaken. | Click or tap here to enter text. | Click or tap here to enter text. |
| 29.3 In applying the requirements in this paragraph, the operator shall take into account all factors that significantly affect the performance of the aeroplane, including, but not limited to the weight of the aeroplane, the operating procedures, the pressure-altitude appropriate to the elevation of the aerodrome, the ambient temperature, the wind, the runway slope, and the surface conditions of the runway for landplanes and water surface condition for seaplanes. Such factors shall be taken into account directly as operational parameters or indirectly by means of allowances or margins which may be provided in the scheduling of performance data or in the comprehensive and detailed code of performance in accordance with which the aeroplane is being operated.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 29.4 The operator shall ensure, for each aeroplane it operates, that: |  |
| 1. The weight at the start of its take-off is not greater than the weight necessary to comply with paragraph 29.5, allowing for expected reductions in weight as the flight proceeds, and for such fuel jettisoning or diversion as is envisaged in applying paragraph 29.6 and, in respect of alternate aerodromes, paragraphs 29.4 (c) and 29.7;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The weight at the start of take-off does not exceed the maximum take-off weight specified in the aeroplane flight manual for the pressure-altitude appropriate to the elevation of the aerodrome, and, if used as a parameter to determine the maximum take-off weight, any other local atmospheric condition;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The estimated weight for the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome does not exceed the maximum landing weight specified in the flight manual for the pressure altitude appropriate to the elevation of those aerodromes, and if used as a parameter to determine the maximum landing mass, any other local atmospheric condition;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The weight at the start of take-off, or at the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the relevant maximum weights at which compliance has been demonstrated with the applicable noise certification Standards in Volume I of Annex 16 to the Convention of International Civil Aviation, unless otherwise authorised in exceptional circumstances for a certain aerodrome or a runway where there is no noise disturbance problem, by the competent authority of the state of the aerodrome.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 29.5 Take-off. |  |
|  The operator shall ensure, for each aeroplane it operates, that in the event of a critical engine failing, or for other reasons, at any point in the take-off, the aeroplane is able to either to discontinue the take-off and stop within the accelerate-stop distance available, or to continue the take-off and clear all obstacles along the flight path by an adequate vertical or horizontal distance until the aeroplane is in a position to comply with paragraph 29. 6. When determining the resulting take-off obstacle accountability area, the operating conditions, such as the cross-wind component and navigation accuracy, must be taken into account. In determining the length of the runway available, the operator shall take into account the loss, if any, of runway length due to alignment of the aeroplane prior to take-off. | Click or tap here to enter text. | Click or tap here to enter text. |
| 29.6 En route. |  |
|  The operator shall ensure, for each aeroplane it operates, that: |  |
| 1. In the event of the critical engine becoming inoperative at any point along the route or planned diversions there from, the aeroplane is able to continue the flight to an aerodrome at which the requirements of paragraph 29.7 can be met, without flying below the minimum flight altitude at any point.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. In the case of aeroplanes having three or more engines, on any part of a route where the location of en-route alternate aerodromes and the total duration of the flight are such that the probability of a second engine becoming inoperative must be allowed for if the general level of safety implied by the standards of this chapter is to be maintained, the aeroplane is able, in the event of any two engines becoming inoperative, to continue the flight to an en-route alternate aerodrome and land.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 29.7 Landing. |  |  |
|  The operator shall ensure, for each aeroplane it operates, that the aeroplane shall at the aerodrome of intended landing and at any alternate aerodrome, after clearing all obstacles in the approach path by a safe margin, be able to land, with assurance that it can come to a stop or, for a seaplane, to a satisfactorily low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 29.8 Obstacle data. |  |  |
|  The operator shall obtain obstacle data to develop procedures to comply with paragraph 29. 5 and shall take into account of charting compliance with Additional Requirements for Single-Engine Aeroplanes | Click or tap here to enter text. | Click or tap here to enter text. |
| 29.9 Subject to paragraph 29.10, a single-engine aeroplane shall only be operated in conditions of weather and light, and over such routes and diversions there from, that permit a safe forced landing to be executed in the event of engine failure. | Click or tap here to enter text. | Click or tap here to enter text. |
| 29.10 An operator intending to operate single-engine turbine-powered aeroplanes at night and/or in IMC shall satisfy the Authority that the airworthiness certification of the aeroplane is appropriate and that the overall level of safety is ensured by:  | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The reliability of the turbine engine;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The operator’s maintenance procedures, operating practices, flight dispatch and crew training programmes;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Equipment and other requirements provided in accordance with Appendix M; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Automatic engine trend monitoring system.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Target* level *of safety (TLS) - A generic term representing the level of risk which is considered acceptable in particular circumstances.*  | Click or tap here to enter text. | Click or tap here to enter text. |
| 29.11 En-route Performance Drift Down |  |  |
| 1. Operators should be aware of the routes on which the en-route performance of their aircraft, following the failure of one or two engines, will be critical and should include instructions relating to such routes in their operations manuals in order to reduce the risks which could arise from indecision or error in the case of engine failure;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. In the case of critical routes it may, in some cases, be possible to regulate the aircraft's planned take-off weight to such an extent that its drift-down performance following engine-failure (in the case of turbine-engine aircraft from a height not exceeding the maximum re-light altitude) will enable it to clear all obstacles on its route by the required margin regardless of the point at which the failure occurs. In other cases, it may be necessary to calculate a critical point, or a number of critical points, which would determine the action to be taken in the event of engine failure at any given position, ie. turn back, continue along the planned route or divert along an alternative route;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Instructions should take into account the accuracy of navigation which may be expected of the flight crew in view of the crew complement and the aids available. Account should also be taken of the effect of varying meteorological conditions. Assumed winds and temperatures used in the calculation of the critical point(s) must be indicated because, if forecast or actual conditions differ from these used at the planning stage, the Pilot-in-Command may require to amend the drift-down procedure.
 | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **30 OPERATING INSTRUCTIONS** |
| 30.1 The operator shall ensure that all operations personnel are properly instructed in their particular duties and responsibilities and the relationship of such duties to the operation as a whole. | Click or tap here to enter text. | Click or tap here to enter text. |
| 30.2 The operator shall not permit an aeroplane in his charge to be taxied on the movement area of an aerodrome by a person other than a flight crew member, unless that person, seated at the controls: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Has been duly authorised by the operator or its designated agent and is competent to taxi the aeroplane and to use the radio telephone;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Has received instruction and continuation training in respect of aerodrome layout, routes, signs, marking, lights, air traffic control signals and instructions, phraseology and procedures, and is able to conform to the operational standards required for the safe aeroplane movements at the aerodrome; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Where applicable, has received permission from the aerodrome operator to taxi the aeroplane at the aerodrome.
 | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **31 USE OF AIRBORNE COLLISION AVOIDANCE SYSTEM (ACAS)** |
| 31.1 The operator shall establish procedures to ensure that: |  |
| 1. When ACAS is installed and serviceable, it shall be used in flight in a mode that enables Resolution Advisories (RA) to be produced unless to do so would not be appropriate for conditions existing at the time.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. When undue proximity to another aircraft (RA) is detected by ACAS, the pilots, unless doing so would jeopardise the safety of the aeroplane, shall follow the RA even if there is a conflict between the RA and an air traffic control (ATC) instructions to manoeuvre.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Nothing in subparagraph 31.1 (b) shall prevent the pilot-in-command from exercising his best judgement and full authority in the choice of action to resolve a traffic conflict or avert a potential collision.

\*Refer to procedure in ICAO Doc 8168 PANS OPS Volume I.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Unless otherwise specified in an air traffic control instruction, to avoid unnecessary airborne collision avoidance system (ACAS II) resolution advisories in aircraft at or approaching adjacent altitudes or flight levels, an aeroplane climbing or descending to an assigned altitude or flight level, especially with an autopilot engaged, shall do so at a rate less than 1 500 ft/min or 8 m/sec (depending on the instrumentation available) throughout the last 300 m (1 000 ft) of climb or descent to the assigned level when the pilot is made aware of another aircraft at or approaching an adjacent altitude or flight level
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Material concerning the development of these procedures is contained in the PANS-OPS (Doc 8168) Volume I, Part III, Section 3, and Chapter 3* | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **32 OPERATIONAL CONTROL** |
| 32.1 The operator is required to establish in its Operations Manual, the parties responsible for operational control, the related policies, processes, standards and procedures for the management of all flights. This would include procedures such as the preparation and dissemination of pre-flight aeronautical information contained in the AIP, AIC and AIRAC.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 32.2 Additional information on Operational Control is provided in Appendix O of this document. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **33 AIRCRAFT TRACKING** |
| 33.1 The operator shall establish an aircraft tracking capability to track aeroplanes throughout its area of operations. ***Note:*** *See CAAT Guidance Material for Aircraft Tracking.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 33.2 The operator shall track the position of an aeroplane through automated reporting at least every 15 minutes for the portion(s) of the in-flight operation(s) under the following conditions: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The aeroplane has a maximum certificated take-off mass of over 27000 kg and a seating capacity greater than 19; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Where an ATS unit obtains aeroplane position information at greater than 15 minute intervals.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *See Annex 11, Chapter 2, for coordination between the operator and air traffic services providers regarding position report messages.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 33.3 The operator shall track the position of an aeroplane through automated reporting at least every 15 minutes for the portion(s) of the in-flight operation(s) that is planned in an oceanic area(s) under the following conditions: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The aeroplane has a maximum certificated take-off mass of over 45500 kg and a seating capacity greater than 19; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Where an ATS unit obtains aeroplane position information at greater than 15 minute intervals.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *See Annex 11, Chapter 2, for coordination between the operator and air traffic services providers regarding position report messages.* | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 1:*** *Oceanic area, for the purpose of aircraft tracking, is the airspace which overlies waters outside the territory of a State.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 33.4 Notwithstanding the provisions in 33.2, the operator may, based on the results of an approved risk assessment process implemented by the operator, allow for variations to automated reporting intervals. The process shall demonstrate how risks to the operation, resulting from such variations, can be managed and shall include at least the following: | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Capability of the operator’s operational control systems and processes, including those for contracting ATS units;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Overall capability of the aeroplane and its systems;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Available means to determine the position of, and communicate with, the aeroplane;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Frequency and duration of gaps automated reporting;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Human factors consequences resulting form changes to flight crew procedures; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Specific mitigation measures and contingency procedures.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *Guidance on development, implementation and approval of the risk assessment process, which allows for variations to the need for automatic reporting and the required interval, including variation example, can be found in the Aircraft Tracking Implementation Guidelines (Cir347).* | Click or tap here to enter text. | Click or tap here to enter text. |
| 33.5 The operator shall establish procedures, in his Operations Manual, approved by the Authority for the retention of aircraft tracking data to assist Search and Rescue (SAR) in determining the last known position of the aircraft and shall develop procedure for third parties that perform related work on its behalf. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **34 CREW BRIEFINGS** |
| 34.1 An operator is required to establish crew briefings as an integral part of SOPs. The conduct of departure and approach briefing for situational awareness shall be established. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **35 DOCUMENTS TO BE CARRIED** |
| 35.1 The operator shall ensure that all the following documents are carried on all its aircraft: |  |
| 1. Certificate of Registration;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Certificate of Airworthiness;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Licences and Medical Assessment of the Flight Crew;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Radio Licence;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Noise Certification;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Third-Party Liability Insurance Certificate(s); and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Certified True Copy Air Operator Certificate and Copy of Operations Specifications Relevant to the Aircraft Type;
 | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **36 ACCIDENT PREVENTION AND FLIGHT SAFETY** |
| 36.1 Operators are to establish and maintain accident prevention and flight safety programmes under the supervision of a person specifically nominated for the purpose. Operators should refer to ICAO Doc 9859 - ‘Safety Management Manual’ which contains information and guidance on Flight Data Analysis Programmes. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **37 ACCIDENT REPORTING** |
| 37.1 Provision must be made for all operating staff to have ready access to the prescribed requirements for the reporting and investigation of accidents. In particular, operating staff should be familiar with the definitions used in the legislation, the duty to furnish information, and the rules governing the removal of damaged aircraft. | Click or tap here to enter text. | Click or tap here to enter text. |
| 37.2 Instructions must be issued on the reporting of accidents occurring overseas to the regulating authority of the country concerned and the action necessary to prevent removal or interference with any part of the aircraft without proper permission. This is in addition to operators’ existing responsibility to inform the Authority. The operations manual should contain the address and telephone numbers of the Aircraft Accident Investigation Committee (AAIC). | Click or tap here to enter text. | Click or tap here to enter text. |
| 37.3 If doubt exists on whether an occurrence is an accident or an incident, it should be reported to the Aircraft Accident Investigation Committee (AAIC) who will decide on its classification. | Click or tap here to enter text. | Click or tap here to enter text. |
| 37.4 All aeroplanes which are required to record pilot input and/ or control surface position of primary control (pitch, roll, yaw) for which the application for type certification is submitted to the Authority and which are required to be flitted with an FDR shall record interval of 0.125 seconds. | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note:*** *For aeroplanes with control systems in which movement of a control surface will back drive the pilot’s control, “or” applies. For aeroplanes with* control *systems in which movement of a control surface will not back drive the pilot’s control, “and” applies. In aeroplanes with independent moveable surfaces, each surface needs to be recorded separately.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 37.5 To preserve flight recorder records, flight recorders shall be de-activated upon completion of flight time following an accident or incident. The flight recorders shall not be re-activated before their disposition as determined by the investigation authority and in accordance with the ICAO standards. Flight recorder means flight data recorder and/or cockpit voice recorder, where applicable. | Click or tap here to enter text. | Click or tap here to enter text. |
| 37.6 Documentation concerning parameter allocation, conversion equations, periodic calibration and other serviceability/maintenance information of the flight data recorder should be maintained by the operator. The documentation must be sufficient to ensure that accident investigation authorities have the necessary information to read the data in engineering units. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **38 INTERCEPTION PROCEDURE** |
|  In accordance with the ICAO SARPs under Annex 6, a copy of the following notified procedures must be carried on board the aircraft: |  |
| 1. Procedures to be followed by the pilot in command of an intercepted aircraft; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Notified visual signals for use by intercepting and intercepted aircraft. For instance, these are available in reference publications such as the AERAD flight guide supplement and JEPPESEN manuals.
 | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **39 AUTOMATIC DEPENDENT SURVEILLANCE BROACAATST (ADS-B) OUT OPERATIONS** |
| 39.1 ICAO’s Asia-Pacific Regional Group has decided to use the 1090MHz (Mode S) Extended Squitter datalink as the globally interoperable link for ADS-B operations. ICAO has also issued a number of technical and operational standards to support its introduction. | Click or tap here to enter text. | Click or tap here to enter text. |
| 39.2 Operators wishing to operate in ADS-B airspace are to submit their proposed procedures to CAAT for acceptance, prior to including such procedures in their operations manual. All operators requiring ADS-B specific approval shall apply to the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| 39.3 For flights in ADS-B airspace, an aircraft shall be equipped with either: |  |
| 1. The ADS-B equipages that have been certificated as meeting EASA Acceptable Means of Compliance AMC 20-24 ‘Certification Considerations for Enhanced ATS in Non-Radar Areas using ADS-B Surveillance (ADS-B-NRA) via 1090 MHZ Extended Squitter’, or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The ADS-B equipages that meet the equipment configuration standards of Australia Civil Aviation Order 20.18 Appendix XI or other reputable authority standards such as the FAA.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 39.4 The criteria for granting the ADS-B specific approval are: |  |
| 1. The continuing airworthiness of ADS-B system must be assured. As part of the operational approval process, existing established maintenance practices or a proposed maintenance programme for the aircraft needs to be reviewed to ensure that it meets relevant requirements;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The Minimum Equipment List needs to reflect the functional requirements of the ADS-B system;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Appropriate flight operations training programme and operational procedures are established to ensure that pilots are knowledgeable about ADS-B operations and their on-board operational equipment.
 | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **40 OPERATING CONSIDERATIONS AND FACILITIES** |
| 40.1 An operator shall ensure that a flight will not be commenced unless it has been ascertained by every reasonable means available that the ground and/or water facilities available and directly required on such flight, for the safe operation of aircraft and the protection of the passengers, are adequate for the type of operation under which the flight is to be conducted and are adequately operated for this purpose.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 40.2 An operator must ensure that a flight will not commence or continue as planned unless it has been ascertained by every reasonable mean available of departure to aerodrome of arrival, including the intended take-off, destination and en-route alternate aerodromes, can be safely used for planned operation. When intending to operate over or near conflict zone, a risk assessment must be conducted and appropriate risk mitigation measures taken to ensure a safe flight. | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 1:*** *“Reasonable means” in this Standard is intended to denote the use, at the point of departure or while the aircraft is in flight, of information available to the operator either through official information published by the aeronautical information service or readily obtainable from other sources.* | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 2:*** *Guidance on safety risk assessments can be found in the Safety Management Manual (SMM)(DOC 9859)* | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note 3:*** *The Risk Assessment Manual for Civil Aircraft Operations Over or Near Conflict Zones (DOC10084) contains further guidance on risk assessment for air operators when flying over or near conflict zones*. | Click or tap here to enter text. | Click or tap here to enter text. |
| 40.3 An operator shall ensure that any inadequacy of facilities observed in the course of operations is reported to the authority responsible for them, without undue delay. | Click or tap here to enter text. | Click or tap here to enter text. |
| 40.4 Subject to their published conditions of use, aerodromes and their facilities shall be kept continuously available for flight operations during their published hours of operations, irrespective of weather conditions. | Click or tap here to enter text. | Click or tap here to enter text. |
| 40.5 An operator shall, as part of its safety management system, assess the level of Rescue and Fire Fighting Service (RFFS) protection available at any aerodrome intended to be specified in the operational flight plan in order to ensure that an acceptable level of protection is available for the aeroplane intended to be used. | Click or tap here to enter text. | Click or tap here to enter text. |
| 40.6 Information related to the level of RFFS protection that is deemed acceptable by the operator shall be contained in the operations manual after acceptance by the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| ***Note****: ICAO Annex 6 Part I Attachment I contain guidance on assessing an acceptable level of RFFS protection at aerodromes.* | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **41 MINIMUM EQUIPMENT LISTS** |
| 41.1 Operators shall not operate aircraft with unserviceable equipment, except under the approval granted by the Authority. Such Approval will be granted only after the content of the proposed Minimum Equipment List (MEL) has been vetted and found acceptable by the Airworthiness and Engineering Department and Flight Operations Standards Department. | Click or tap here to enter text. | Click or tap here to enter text. |
| 41.2 The introduction to any MEL must contain a statement reminding the aircraft commander of his responsibility to ensure that the aircraft is in every way fit for the intended flight, and that he may apply a higher minimum standard if, in his opinion, it is necessary to do so in order to secure the safe operation of the aircraft. | Click or tap here to enter text. | Click or tap here to enter text. |
| 41.3 MELs must be submitted to the Airworthiness and Engineering Department at the time of an application for an AOC or a variation which covers the introduction of a new aircraft type, as should instructions and guidance to commanders on the operation of aircraft with deferred defects. The content of operators’ MELs may not be less restrictive than that of the associated Master Minimum Equipment List (MMEL). Should an MMEL become more restrictive due to amendment action, operators must amend their MELs similarly. | Click or tap here to enter text. | Click or tap here to enter text. |
| 41.4 When the carriage of unserviceable equipment results in a deviation from the normal drills, satisfactory alternative drills must be specified in the manual. For example, when thrust reversers are listed as minimum equipment, the operator must publish alternative drills. | Click or tap here to enter text. | Click or tap here to enter text. |
| 41.5 The MEL should also include information on Configuration Deviation List (CDL). | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
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| **42 CONFIGURATION DEVIATION LIST** |
|  The CDL(s), if provided by the manufacturer, taking account of the aircraft types and variants operated, including procedures to be followed when an aircraft is being dispatched under the terms of its CDL. | Click or tap here to enter text. | Click or tap here to enter text. |

|  |
| --- |
| **Applicant / AOC Holder(s) Declaration** |
| I declare the information given in this submission is true in every respect. |
| Signature | Click or tap here to enter text.Name | Click or tap here to enter text.Position in company | Click or tap to enter a date.Date (Day / Month / Year) |

|  |
| --- |
| **CAAT Assessment Use** |
| **CAAT’s Comments, Notes and Recommendations:** Click or tap here to enter text. |
| Click or tap to enter a date.Date received | Click or tap here to enter text.Assessed by (Name/Signature) | Click or tap here to enter text.CAAT Inspector Function | Click or tap to enter a date.Assessment Date (Day / Month / Year) |