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| **Statement of Compliance – Chapter 8: Additional Requirements for Helicopters** |
| 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 here to enter text. |
| **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** |
| 1.1 This Chapter contains additional requirements that operators and pilots-in-command engaged in helicopter operations for the purpose of public transport shall comply with to qualify for and maintain the operators’ AOC. | Click or tap here to enter text. | Click or tap here to enter text. |
| **2 HELIPORT OPERATING MINIMA** |
| 2.1A General |
| 2.1A.1 An operator shall establish heliport operating minima for each heliport that is used by the operator for its operations. The method of determination of such minima shall be subject to the approval of the Authority. Such minima shall not be lower than any that may be established for such heliports by the State in which the heliport is located, except when specifically approved by that State. For details on Low Visibility Operations – Training Qualifications can be found in Appendix L of this document. ***Note:-*** *Operations with lower visibilities than normally associated with the helicopter operating minima may only be allowed on a helicopter with HUD and/or EVS if approval has been obtained in accordance to paragraph 2.9.1 of this Chapter.* | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.1A.2 The operator of Thai registered helicopter shall establish the heliport or landing location operating minima which will apply to any particular operation and shall take full account of: |  |
| 1. The type, performance and handling characteristics of the helicopter 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 competence and experience;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The dimensions and characteristics of the final approach and take-off areas (FATO) / runways 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 the 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 helicopter for the purpose of navigation and/or control of the flight path during the take-off, the approach, the flare, the hover, the landing, the roll out and the missed approach;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The obstacles in the approach and missed approach areas and the obstacle clearance 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 margins.
 | 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. |
| 2.1B Helicopter Operating Minima (Operations under IFR) |
| 2.1B.1 An operator shall classify instrument approach operations based on the designed lowest operating minima below which an approach operation shall only be continued with the required visual reference as follows: | Click or tap here to enter text. |
| 1. Type A: a minimum descent height or decision height at or above 75 m(250ft); 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 categorised 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 III (CAT III): a decision height lower than 30 m (100 ft) or no decision height and a runway visual range less than 300 m or no runway visual range limitations;
 | 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 operation 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 IIIA but with an RVR in the range of CAT IIIB would be considered a CAT IIIB 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-in-command 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 a 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 is contained in the All weather Operations Manual (Doc 9365). | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.1B.2 An 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. *Note: - Guidance on low visibility operations is contained in the Manual of All*-*Weather Operations* (*Doc 9365*). | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.1B.3 For take-off in low visibility, the operator of Thai registered helicopter shall obtain specific approval for the minimum take off RVR from the Authority. *Note:- In general, visibility for take*-*off is defined in terms of RVR*. *An equivalent horizontal visibility may also be used*. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.1B.4 An operator shall determine the operating minima for 2D instrument approach operations using instrument approach procedures establishing a Minimum Descent Altitude (MDA) or Minimum Descent Height (MDH), minimum visibility and, if necessary, clued conditions. *Note:-**For guidance on applying a Continuous Descent Final Approach ( CDFA) 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. |
| 2.1B.5 An operator shall determine the operating minima for 3D instrument approach operations using instrument approach procedure 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. |
| 2.2 Take-off Minima |
| 2.2.1 The operator shall establish take-off minima and the relevant visibility or runway visual range (RVR) limits, taking into account all relevant factors for each heliport planned to be used and the helicopter characteristics. Where there is a need to see and avoid obstacles on departure and/or a forced landing, additional conditions (e.g. ceiling) must be specified. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.2.2 The pilot-in-command shall not commence take-off unless the weather conditions at the heliport of departure are equal to or better than applicable minima for landing at that heliport unless a suitable take-off alternate heliport is available. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.2.3 When the reported meteorological visibility is below that required to take-off and the RVR is not reported, a take-off may only be commenced if the pilot-in-command can determine that the RVR and visibility along the take-off FATO and runway is equal to or better than the required minima. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.2.4 When no reported meteorological visibility or RVR is available, a take-off may only be commenced if the pilot-in-command can determine that the RVR and visibility along the take-off FATO and runway is equal to or better than the required minima. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.2.5 The take-off minima must be selected to ensure sufficient guidance to control the helicopter in the event of both a discontinued take-off in adverse circumstances and a continued take-off after failure of a critical power-unit. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.2.6 An operator shall not conduct night operations without ground lighting to illuminate the FATO, runway and any obstacle unless otherwise agreed by the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.3 Required RVR/Visibility |
| 2.3.1 For operations in performance Class 1, an operator shall establish an RVR and visibility respectively (RVR/VIS) as take-off minima in accordance with Table 1 in Appendix T. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.3.2 For operations in performance Class 2, the take-off minima shall be 800 m RVR/Vis. In addition, the operator shall instruct Pilots-in-Command to remain clear of cloud during the take-off maneuver until reaching Performance Class 1 capabilities. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.4 Non-Precision Approach |
| 2.4.1 An operator shall ensure that system minima for non-precision approach procedures, which are based upon the use of Instrument Landing Systems (ILS) without glide path (LLZ only), Very high frequency Omni-directional Radio range (VOR), Non-Directional Beacon (NDB), Surveillance Radar Approach (SRA), and very high frequency Direction-Finding (VDF) are not lower than the Minimum Descent Height (MDH) values given in Table 2 in Appendix T. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.4.2 An operator shall ensure that the minimum descent height for a 2D instrument approach operation is not lower than either: | Click or tap here to enter text. |
| 1. the Obstacle Clearance Height/ Limit (OCH/OCL) for the category of helicopter; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the system minimum.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.4.3 A pilot may not continue an approach below minimum descent altitude (MDA)/minimum descent height (MDH) unless at least one of the following visual references for the intended FATO/runway is distinctly visible and identifiable to the pilot: |  |
| 1. Elements of approach light system;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The threshold;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The threshold markings;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The threshold lights;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The threshold identification lights;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The visual glide slope indicator;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The touchdown zone or touchdown zone markings;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The touchdown zone lights;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. FATO/Runway edge lights; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Other visual references accepted by the Authority.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.4.4 For 2D instrument approaches operation by helicopters operating in Performance Class 1, the required RVR minima given in Table 3 in Appendix T shall apply. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.4.5 When the missed approach point is within 0.5 NM of the landing threshold, the approach minima given for full facilities may be used regardless of the length of approach lighting available. However FATO/runway edge lights, threshold lights, end lights and FATO/runway markings are still required. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.5 Precision Approach - Category I Operations |
| 2.5.1 A Category I operation is a precision instrument approach and landing using ILS, Microwave Landing System (MLS) or Precision Approach Radar (PAR) with a decision height not lower than 200 ft and with a runway visual range not less than 500 m. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.5.2 An operator must ensure that the decision height to be used for a Category I precision approach is not lower than: |  |
| 1. the minimum decision height specified in the helicopter flight manual if stated;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the minimum height to which the 3D instrument approach operation aid can be used without the required visual reference; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the OCH/OCL for the category of helicopter or 200 ft.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.5.3 A pilot may not continue the approach below the Category I decision height, determined in accordance with sub-paragraph 2.5.2 above, unless one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot: |  |
| 1. Elements of approach light system;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The threshold;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The threshold markings;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The threshold lights;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The threshold identification lights;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The visual glide slope indicator;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The touchdown zone or touchdown markings;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The touchdown zone lights; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. FATO/runway edge lights.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.5.4 For Category I operations in Performance Class 1 helicopters the minima contain in Table 4 in Appendix T shall apply. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.5.5 For night operations ground lighting must be available to illuminate the FATO/runway and any obstacles unless otherwise agreed by the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.6 VISUAL FLIGHT RULES OPERATING MINIMA |
| 2.6.1 An operator shall ensure that: |  |
| 1. flights conducted in accordance with Visual Flight Rules (VFR) are in accordance with the minimum visibilities for VFR operations stated in Table 5 in Appendix T;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. helicopters are operated in flight visibility of not less than 1500 m during daylight and not less than 5 km by night. Low level overwater flights out of sight of land are only to be conducted under VFR when the cloud ceiling is greater than 600 ft by day and 1200 ft by night;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Notwithstanding paragraph 2.6.1(b), in class G airspace, when flying between helidecks where the over water sector is less than 10 km, VFR flights shall be conducted in accordance to Table 6 in Appendix T; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Notwithstanding paragraph 2.6.1(b), flights operating under special VFR conditions comply with the zone minima in force.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.7 ONSHORE CIRCLING |
| 2.7.1 The specified MDH for onshore circling shall not be less than 250 ft, and the meteorological visibility shall not be less than 800m.Note: Visual manoeuvring (circling) with prescribed tracks is an accepted procedure within the meaning of this paragraph. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.8 AIRBORNE RADAR APPROACH (ARA) |
| 2.8.1 An operator shall not conduct an ARA unless authorised by the Authority. |  |  |
| 2.8.2 The operator shall establish procedures for the conduct of ARAs. An ARA shall not be conducted unless: |  |
| 1. The radar can provide course guidance to the pilot-in-command to ensure obstacle clearance;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The pilot-in-command can ensure a clear path exists on the radar screen for the final and missed approach segments before commencing the final approach. If lateral clearance from any obstacle is less than 1.0 NM, the pilot-in-command shall:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Approach to a nearby target structure and thereafter proceed visually to the destination structure; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Make the approach from another direction leading to a circling manoeuvre.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The cloud ceiling above the helideck is sufficiently clear to permit a safe landing.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.8.3 An ARA shall not continue beyond Decision Range or below MDH/MDA unless he is visual with the destination. The decision range shall not be less than 0.75 NM unless an operator has demonstrated to the Authority that a lesser Decision Range can be used at an acceptable level of safety. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.8.4 Flights using ARAs are not permitted to rigs or vessels under way unless the flight crew consists of at least 2 pilots. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.8.5 The operator shall establish the minimum descent height (MDH) using a radio altimeter. The MDH shall not be less than 50 ft above the elevation of the helideck and: |  |
| 1. For an ARA shall not be lower than:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 200 ft by day; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 300 ft by night
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For an approach leading to a circling manoeuvre shall not be lower than:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 300 ft by day; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 500 ft by night
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.8.6 An MDA shall only be used if the radio altimeter is unserviceable. The MDA shall be a minimum of the MDH plus 200 ft and shall be based on a calibrated barometer at the destination or the lowest forecast QNH for the region. | Click or tap here to enter text. | Click or tap here to enter text. |
| 2.9 HELICOPTERS EQUIPPED WITH HEAD-UP DISPLAY (HUD) AND/OR ENHANCED VISION SYSTEMS (EVS) |
| 2.9.1 Operational credit(s) for operations with helicopters equipped with automatic landing systems, a HUD or equivalent displays, EVS, SVS or CVS shall be authorized by the CAAT. Where the operational credit relates to low visibility operations, the operator shall obtain a specific approval from the CAAT. Such authorizations shall not affect the classification of the instrument approach procedure. Note: - Operational credit includes:1. for the purposes of an approach ban (2.4.1.2), a minima below the heliport or landing location operating minima;
2. reducing or satisfying the visibility requirements; or
3. requiring fewer ground facilities as compensated for by airborne capabilities.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 3 LOW VISIBILITY OPERATIONS |
| 3.1 General |  |
| 3.1.1 An operator shall not conduct any low visibility take-off unless otherwise approved by the Authority. | Click or tap here to enter text. | Click or tap here to enter text. |
| 3.1.2 An operator shall not conduct Category II or III operations unless: |  |
| 1. The helicopter involved in the conduct of the operations is certified for operations with decision heights below 200 feet;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The operator has established and maintains a system for recording the success rate for approach or automatic landing to monitor the overall safety of the operations;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The helicopter is piloted by at least 2 pilots qualified for low visibility operations;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Decision height is determined by means of a radio altimeter; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Runway visual range (RVR) is made available to the pilot-in-command.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 3.1.3 An operator wishing to conduct low visibility take-off, Category II and III operations must establish relevant training requirements and operational procedures approved by the Authority for the conduct of such operations. The procedures shall be contained in the Operations Manual. Refer to Appendix U for Low Visibility Operations. | Click or tap here to enter text. | Click or tap here to enter text. |
| 3.2 Heliport |  |
| 3.2.1 An operator shall not use a heliport for Category II or III operations unless: |  |
| 1. the heliport is approved for such operations by the State in which the heliport is located; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the heliport has established low visibility procedures for the purpose of low visibility operations.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 3.3 Responsibilities of Pilot-in-Command |  |
| 3.3.1 The pilot-in-command shall not conduct low visibility take-off, Category II and III operations unless he is satisfied that: |  |
| 1. The status of the helicopter and the relevant airborne systems is appropriate for the specific operations to be conducted;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the status of the visual and non-visual facilities is sufficient prior to commencing a low visibility take-off or a Category II or III approach;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the appropriate low visibility operating procedures are in force according to information received from air traffic services before commencing a Low Visibility Take-off or a Category II or III approach; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the flight crew members conducting the low visibility take-off or a Category II or III operations are properly qualified to do so.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 3.4 Minimum Equipment |  |
| 3.4.1 An operator shall include in the Operations Manual the minimum equipment that has to be serviceable at the commencement of a low visibility take-off or a Category II or III approach in accordance to the Helicopter Flight Manual. | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
| --- | --- | --- |
| **4 FUEL PLANNING AND MANAGEMENT** |
| 4.1 Fuel Planning |  |
| 4.1.1 An operator shall not commence a flight unless, taking into account both the meteorological conditions and any delays that are expected in flight, the helicopter carries sufficient fuel and oil to ensure that it can safely complete the flight. In addition, fuel reserves shall be carried to provide for contingencies.  | Click or tap here to enter text. | Click or tap here to enter text. |
|  4.1.2 A minimum in-flight indicated fuel state shall be set down for each type of helicopter and operation, particularly for specialised activities, such as aerial crane work and winching operations.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.1.3 Operators operating helicopters equipped for cross-feeding or balancing of fuel in flight shall ensure that cross-feeding or fuel balancing procedures are contained in the operations manual. | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.2 VFR Flights |  |
| 4.2.1 For flights by day operated under VFR over non-hostile terrain (i.e. where a forced landing may be carried out with a high degree of confidence that there is not likely to be a consequential survival problem), the total fuel carried must be sufficient for at least: | Click or tap here to enter text. |
| 1. Start-up and taxi (this may be a standard fixed amount);
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The route from departure point to destination;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Holding at destination for at least 20 minutes (at endurance speed); and
 |  |  |
| 1. Contingency purposes. Contingency reserve shall be 5% of fuel require for the route. Extra fuel may be carried at the discretion of the pilot-in- command.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.2.2 Flights taken on a VFR fuel formula above may not carry out flight under IFR unless all the fuel requirements outlined in paragraph 4.3 are met when flight in IFR starts. | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.3 IFR Flights |  |
| 4.3.1 For flights operated under IFR, offshore and over hostile terrain (i.e. where forced landings are not possible or which present a consequential survival problem.); the total fuel carried must be sufficient for at least: | Click or tap here to enter text. |
| 1. Start-up and taxi (this may be a standard fixed amount);
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The route from departure point to destination;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. One go-around;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Re-route to an alternate, including diversion to a suitable alternate using a suitable altitude (at least the MSA), unless otherwise approved by the Authority. When no suitable alternate is available (e.g. the destination is isolated), sufficient fuel shall be carried to enable the helicopter to fly for a period that will, based on geographic and environmental considerations, enable a safe landing to be made;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 30 minutes of holding at endurance speed at 450 m (1,500 ft) above the alternate under standard temperature conditions. Additional fuel may be required in areas where air traffic delays are likely to occur; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Contingency purposes. Contingency reserve shall be at least 10% of the total fuel required for Paragraphs 4.3.1 b), c) and d). Extra fuel may be carried at the discretion of the pilot-in-command.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.3.2 Provided the sum total of reserve fuel carried is not less than that stated in paragraph 4.3.1e) and f), operators may define their own fuel formulae to be included in their operations manual.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.3.3 For flights departing from offshore installations and vessels connected with the exploitation of oil, gas and mineral resources to certain land aerodromes, requirements pertaining to fuel for contingency purposes may be waived, subject to approval by the Authority, if at the fuel planning stage, the forecast and the latest information available to the pilot-in-command indicates that the cloud ceiling and visibility at destination will:  | Click or tap here to enter text. |
| 1. By day, be at least 600 ft above the surface with 4 km visibility and no probability of temporary or intermittent deterioration.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. By night, 1200 ft above the surface with 5 km visibility and no probability of temporary or intermittent deterioration.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.4 Safety Measures for Refuelling |  |
| 4.4.1 A helicopter shall not be refuelled when passengers are embarking, on board, or disembarking. | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.4.2 Notwithstanding paragraph 4.4.1, a helicopter may be refuelled with passengers on board if the helicopter is undertaking ambulance or life-saving operations or when prevailing weather conditions may cause significant disembarkation and embarkation risks, provided the following conditions are met: | Click or tap here to enter text. |
| 1. all main exits should be available for immediate use;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the external area adjacent to the exits are kept clear;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. two-way communications are maintained at all times between the ground crew supervising the fuelling and the pilot; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. In case of helicopters where only the normal exit is on the same side as the fuelling point filler caps, then
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.4.3 A helicopter shall not be fuelled at onshore and offshore sites while the engines or rotors are running, unless: | Click or tap here to enter text. |
| 1. The helicopter is undertaking ambulance and other emergency missions requiring extreme urgency;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Severe weather conditions make it inadvisable to stop engines/rotors;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Due to adverse and unusual operational requirements at the Pilot-in-Command’s discretion and with agreement of the fueling undertaker; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Due to special operational requirements and after a risk assessment for the special operation has been carried out by the operator and approved by the Authority.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 4.4.4 Fuelling offshore must only be carried out from helicopter landing areas approved by the Authority. Operators should ensure good fire safety practices at all times fuelling takes place, including the provision of rescue and firefighting personnel.  | Click or tap here to enter text. | Click or tap here to enter text. |
|  Note: Further guidance on helicopter fuelling can be found in ICAO Heliport Manual - Doc. 9261 - AN/903/2.  | Click or tap here to enter text. | Click or tap here to enter text. |

| **CAAT Requirement** | **Manual References / Applicant’s Comments** | **CAAT Notes** |
| --- | --- | --- |
| 5 ALTERNATE HELIPORTS |
| 5.1 General |  |
| 5.1.1 An operator shall establish procedures for the selection of destination and alternate heliports when planning a flight. An operator shall only authorise use of heliports that are adequate for the type(s) of helicopter and operation(s) concerned. | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.2 Take-off Alternate Heliports |  |
| 5.2.1 The operator shall select and specify a take-off alternate heliport in the operational flight plan if the weather conditions at the heliport of departure are at or below the applicable heliport operating minima. For a heliport to be selected as a take-off alternate heliport, available information shall indicate that the conditions at the estimated time of use are at or above the heliport operating minima for that operation.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3 Destination Alternate Heliports |  |
| 5.3.1 An operator conducting a flight in accordance with IFR shall specify at least one destination alternate in the operational flight plan and the flight plan, unless:  | Click or tap here to enter text. |
| 1. the duration of the flight and the meteorological conditions prevailing are such that there is reasonable certainty that, at the estimated time of arrival at the heliport of intended landing, and for a reasonable period before and after such time, the approach and landing may be made under visual meteorological conditions; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. the heliport of intended landing is isolated and no suitable alternate is available. A point of no return (PNR) shall be determined.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3.2 For a heliport to be selected as a destination alternate, the available information shall indicate that, at the estimated time of use, the conditions will be at or above the heliport operating minima for that operation.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.3.3 For a flight departing to a destination which is forecast to be below the heliport operating minima, two destination alternates should be selected. The first destination alternate should be at or above the heliport operating minima for destination and the second at or above the heliport operating minima for alternate. | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.4 Selection of Offshore Alternates |  |
| 5.4.1 An offshore alternate shall not be selected unless the operator has published the selection procedures in the operations manual, which has been approved by the Authority. The dimensions, configuration and obstacle clearance of individual helidecks or other sites shall be assessed in order to establish operational suitability for use as an offshore alternate by each helicopter type proposed to be used.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.4.2 Offshore alternates may be specified subject to the following conditions: | Click or tap here to enter text. |
| 1. An offshore alternate shall be used only after the helicopter has flown beyond a PNR. Prior to PNRs onshore alternates shall be used;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. One engine inoperative landing capability shall be attainable at the alternate;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Deck availability shall be guaranteed. The operator shall establish procedures for guaranteeing the availability of the helideck. Where there is the possibility of the helideck being out of use due to another aircraft being scheduled to land on the helideck or for any other circumstance, the operator must seek another suitable alternate;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Weather minima shall be established taking into account the accuracy and reliability of meteorological information; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The MEL shall reflect essential requirements for this type of operation.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.4.3 When operating offshore, any spare payload capacity should be used to carry additional fuel if it would facilitate the use of an onshore alternate. | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.5 Offshore Alternate Deck Landing Environment, Performance and Weather Considerations |  |
| 5.5.1 An operator shall provide information on the landing environment of a helideck that is proposed for use as an offshore alternate, including the physical characteristics of the helideck (including the orientation of the helideck), the effect of the wind direction and strength and turbulence. This information shall be made available to the pilot-in-command both at the planning stage of the flight and in the flight, and should be published in an appropriate form in the operations manual, such that the suitability of the helideck for use as an offshore alternate can be assessed.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.5.2 The operator shall establish that the offshore alternate helideck meets the criteria for size and obstacle clearance appropriate to the performance requirements of the type of helicopter concerned.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.5.3 The use of an offshore alternate shall be restricted to helicopters that can achieve one engine inoperative (OEI) in ground effect (IGE) hover at an appropriate power rating at the offshore alternate. Where the surface of the offshore alternate helideck, or prevailing conditions (especially wind velocity), precludes an OEI IGE hover, OEI out of ground effect (OGE) hover performance at an appropriate power rating should be used to compute the landing mass. The landing mass shall be calculated based on the helicopter configuration, environmental conditions and the operation of systems which have an adverse effect on performance. The planned landing mass of the helicopter, including crew, passengers, baggage, cargo plus 30 minutes of Final Reserve fuel, shall not exceed the OEI (whether IGE or OGE as appropriate) landing mass at the time of the approach to the offshore alternate.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.5.4 An operator shall not select a helideck as a destination or offshore alternate unless the aerodrome forecast indicates that during a period commencing one hour before and ending one hour after the expected time of arrival at the destination and offshore alternate, the weather conditions will be at or above the following planning minima: cloud base 600 ft day/ 800 ft night and visibility 4km day/5km night. Where fog is forecast, or has been observed within the last two hours within 60nm of the destination or alternate, offshore alternates should not be used.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 5.6 Point of No Return |  |
| 5.6.1 The operator shall ensure that before passing the PNR - which should not be more than 30 minutes from the destination - the following actions should have been completed: | Click or tap here to enter text. |
| 1. Confirmation that navigation to the destination and offshore alternate can be assured;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Radio contact with the destination and offshore alternate can be assured;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The landing forecast at the destination and offshore alternate has been obtained and confirmed to be above the required minima;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The requirements for landing with one engine inoperative has been checked to ensure that they can be met; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The availability of the offshore alternate should be guaranteed by the duty holder (the rig operator in the case of fixed installations and the owner in the case of mobiles) to the extent possible, having regard to information on current and forecast use of the offshore alternate and on conditions prevailing, until landing at the destination, or the offshore alternate, has been achieved (or until offshore shuttling has been completed).
 | 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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| **6 HELICOPTER LOAD OPERATIONS** |
| 6.1 Loading Instructions |  |
| 6.1.1 An operator shall ensure that loading instructions are included in the operations manual. The loading instructions shall consider the capabilities, limitations and operation of the helicopter(s) intended. The instructions shall be prepared and written in a clear, simple and concise manner for users with little or no aviation experience, such as oil rig crews and contractors’ staff, to understand.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.2 Underslung Load Operations |  |
| 6.2.1 Operators shall ensure that a two-way communications system are established between the flight crew and the ground crew performing underslung load operations and shall include in the operations manual the procedures for the use of such two- way communications system. | Click or tap here to enter text. | Click or tap here to enter text. |
| 6.2.2 All crew members performing underslung load operations shall wear protective helmets. | 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 TURNING OF HELICOPTER ROTOR UNDER POWER** |
| 7.1 A helicopter rotor shall not be turned under power without a qualified pilot at the controls. | Click or tap here to enter text. | Click or tap here to enter text. |
| **8 LOSS OF TAIL ROTOR EFFECTIVENESS** |
| 8.1 An operator shall include in its operations manual procedures to avoid and to recover from loss of tail rotor effectiveness. | Click or tap here to enter text. | Click or tap here to enter text. |
| **9 RADIO ALTIMETER (HEIGHT BUG SETTING PROCEDURES)** |
| 9.1 Helicopters conducting over water operations should be equipped with one radio altimeter and audio voice (if any) alerting devices. | Click or tap here to enter text. | Click or tap here to enter text. |
| 9.2 The operator shall include in its operations manual the procedures for setting the height bug or equivalent decision height indicator. The height indicator shall be set at an appropriate level such as to give pilots “adequate” warning/reaction time. | Click or tap here to enter text. | Click or tap here to enter text. |
| **10 PERFORMANCE** |
| 10.1 Applicability | Click or tap here to enter text. |
| 10.1.1 Helicopters with a passenger seating configuration of more than 19, or helicopters operating to or from a heliport in a congested hostile environment shall be operating in performance Class 1. | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.1.2 Helicopters with a passenger seating configuration of 19 or less but more than 9 should be operating in performance Class 1 or 2, unless operating to or from a congested hostile environment in which case the helicopters shall be operating in performance Class 1. | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.1.3 Helicopters with a passenger seating configuration of 9 or less should be operating in performance Class 1, 2 or 3, unless operating to or from a congested hostile environment in which case the helicopters shall be operating in performance Class 1. | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.2 General | Click or tap here to enter text. |
| 10.2.1 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 indicates that the requirements of Paragraph 10 can be complied with for the flight to be undertaken.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.2.2 In determining the requirements of the performance, the operator shall consider the following parameters: |  |
| 1. Mass of the helicopter;
 | Click or tap here to enter text. |
| 1. mass of the helicopter at the start of the take-off or in the case of in- flight replanning the point from which the revised operational flight plan applies, is not greater than the mass at which the requirement of the Performance Class can be complied with.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Helicopter configuration;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Environmental conditions in particular:
 | Click or tap here to enter text. |
| 1. pressure-altitude, and temperature; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. wind;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| * 1. For take-off, take-off flight path and landing requirements, accountability for wind shall be no more than 50 % of any reported steady head wind component of 5 knots or more;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| * 1. Where take-off and landing with a tail wind component is permitted in the Helicopter Flight Manual, and in all cases for the take-off flight path, not less than 150% of any reported tail wind component shall be taken into account; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| * 1. Where precise wind measuring equipment enables accurate measurement of wind velocity over the point of take-off and landing, alternate wind components specific to a site may be approved by the Authority.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The heli-deck slope, and the surface conditions of the heli-deck;
 | 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. Operation of any system which have adverse effect on performance.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.3 Operating Conditions |  |
| 10.3.1 For helicopters operating in performance Class 2 or 3 in any flight phase where a power unit may cause the helicopter to force land, the operator shall: | Click or tap here to enter text. |
| 1. Define a minimum visibility that is not be less than 1000 m for helicopters operating in performance Class2 and 3, taking into account the characteristics of the helicopter;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Verify that the surface below the intended flight path permits the pilot to execute a safe forced landing;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Conduct operations in performance Class 2 only if the helicopter involved has a safe forced landing capability during take-off and landing; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Conduct operations in performance Class 3 only in a non-hostile environment.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.3.2 Operations in performance Class 3 shall not be performed out of sight of the surface or when the cloud ceiling is less than 180 m (600 ft).  | Click or tap here to enter text. | Click or tap here to enter text. |
| Note: Operations in performance Class 3 in IMC shall not be permitted in Thailand. This is due to the limited airspace and the congested hostile surface environment.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.4 Obstacle Accountability |  |
| 10.4.1 For the purpose of obstacle clearance requirements, an obstacle located beyond the FATO, in the take-off path or the missed approach flight path, shall be considered if its lateral distance from the nearest point on the surface below the intended flight path is not further than:  | Click or tap here to enter text. |
| 1. For VFR operations:
 | Click or tap here to enter text. |
| 1. half of the minimum width of the FATO (or the equivalent term used in the helicopter flight manual) defined in the helicopter flight manual (or when no width is defined, 0.75 D), plus 0.25 times D (or 3 m, whichever is greater), plus:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 0.10 DR for VFR day operations
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 0.15 DR for VFR night operations
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For IFR operations:
 |  |
| 1. 1.5D (or 30m, whichever is greater) plus:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 0.10 DR for IFR operations with accurate course guidance
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 0.15 DR for IFR operations with standard course guidance
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 0.30 DR for IFR operations without course guidance
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.4.2 For operations with initial take-off conducted visually and converted to IFR/IMC at a transition point, the criteria required in Paragraph 10.4.1 a) shall apply up to the transition point then the criteria required in Paragraph 10.4.1 b) shall apply after the transition point.  | Click or tap here to enter text. | Click or tap here to enter text. |
| Note: The transition point cannot be located before the end of TODRH for helicopters operating in performance Class 1 and before the DPATO for helicopters operating in performance Class 2.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.4.3 When considering the missed approach flight path, the divergence of the obstacle accountability area shall only apply after the end of the take-off distance available.  | Click or tap here to enter text. | Click or tap here to enter text. |
| Note: Standard course guidance includes ADF and VOR guidance. Accurate course guidance includes ILS, MLS or other course guidance providing an equivalent navigational accuracy.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.4.4 For take-off using a backup (or a lateral transition) procedure; for the purpose of obstacle clearance requirements, an obstacle, located in the backup  | Click or tap here to enter text. |
| 1. Half the minimum FATO (or the equivalent term used in the Flight Manual) width defined in the Helicopter Flight Manual (or, when no width is defined 0.75D) plus 0.25 times D (or 3m, whichever is greater) plus:
 | Click or tap here to enter text. |
| 1. For VFR day, 0.10 of the distance travelled from the back of the FATO; or
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. For VFR night, 0.15 of the distance travelled from the back of the FATO.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.4.5 Obstacles may be disregarded if they are situated beyond: |  |
| 1. 7R for day operations if navigation accuracy can be achieved by reference to suitable visual cues during the climb.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 10R for night operations if navigation accuracy can be achieved by reference to suitable visual cues during the climb.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 300 m if navigational accuracy can be achieved by appropriate navigation aids; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. 900 m in other cases.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.5 Operating area consideration. |  |
| 10.5.1 For operations in performance Class 1, the dimensions of the FATO should be at least equal to the dimensions specified in the Helicopter Flight Manual.  | Click or tap here to enter text. | Click or tap here to enter text. |
| Note: A FATO that is smaller than the dimensions specified in the helicopter flight manual may be accepted if the helicopter is capable of a hover out of ground effect with one engine inoperative and requirements stated in Paragraph 10.6 below are met.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.6 Operations in performance Class 1. |  |
| 10.6.1 Take-off and initial climb phase. |  |
| 1. The helicopter shall be able, in the event of the failure of the critical power- unit being recognised at or before TDP, to discontinue the take-off and stop within the rejected take-off area available or, in the event of the failure of the critical power-unit being recognised at or after TDP, to continue the take-off, clearing all obstacles along the flight path by an adequate margin until it is in a position to comply with Paragraph 10.6.3.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The take-off mass of the helicopter shall not exceed the maximum take-off mass specified in the helicopter flight manual for the procedure to be used and to achieve a rate of climb of 100 ft per minute at 60 m (200 ft) and 150 ft per minute at 300 m (1000ft) above the level of the heliport with the critical engine inoperative and the remaining power-units operating at an appropriate power rating, taking into consideration the parameters specified in Paragraph 10.2.2c) and Figure 1.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The take-off mass shall be such that the rejected take-off distance required does not exceed the rejected take-off distance available.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The take-off mass shall be such that the take-off distance required does not exceed the take-off distance available.

Note 1: As an alternative, the requirement above may be disregarded provided that the helicopter with the critical power-unit failure recognised at TDP can, when continuing the take-off, clear all Note 2: For elevated heliports, clearance from the elevated heliport edge is shown in Figure 3. | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. An operator shall ensure that, with the critical power-unit inoperative, all obstacles below the backup flight path (the lateral flight path) are cleared by an adequate margin. Only the obstacles in Paragraph
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.6.2 Take-off flight path |  |
| 1. From the end of the take-off distance required with the critical power-unit inoperative:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The take-off mass shall be such that the climb path provides a vertical clearance of not less than 10.7 m (35 ft) for VFR and 10.7 m (35 ft) plus 0.01 DR for IFR operations above all obstacles located in the climb path. Obstacles specified in Paragraph 10.4 shall be considered.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. When a change of direction of more than 15 degrees is made, obstacle clearance requirements shall be increased by 5m (15ft) from the point at which the turn is initiated. The turn shall not be initiated before reaching a height of 60m (200ft) above the take-off surface, unless permitted as part of an approved procedure in the operations manual.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.6.3 En route |  |
| 1. The take-off mass is such that it is possible, in case of the critical power-unit failure occurring at any point of the flight path, to continue the flight to an appropriate landing site at which the conditions of Paragraph 10.6.4 can be met without flying below the appropriate minimum flight altitudes for the route to be flown.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.6.4 Approach, landing and balked landing (Figure 4 and 5). |  |
| 1. In the event of the failure of the critical power-unit being recognised at any point during the approach and landing phase, before LDP, the helicopter shall, at the destination and at any alternate, after clearing all obstacles in the flight path, be able to land and stop within the landing distance available or to perform a balked landing and clear all obstacles in the flight path by an adequate margin. In case of the failure occurring after the LDP, the helicopter shall be able to land and stop within the landing distance available. The estimated landing mass at the destination or alternate should be such that:
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. It does not exceed the maximum landing mass specified in the Flight Manual for the procedure to be used and to achieve a rate of climb of 100 ft per min at 60m (200 ft) and 150 ft per min at 300m (1000 ft) above the level of the heliport with the critical engine power-unit inoperative and the remaining power-units operating at an appropriate power rating, taking into account the parameters specified in Paragraph 10.2.2.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The landing distance required does not exceed the landing distance available unless the helicopter, with the critical power unit failure recognised at LDP can, when landing, clear all obstacles in the approach path.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. In the case of the critical power-unit failure occurring at any point after LDP, it is possible to land and stop within the FATO; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. In the event of the critical power-unit failure being recognised at the LDP or at any point before the LDP, it is possible to land and stop within the FATO or to overshoot, meeting the conditions of Paragraph 10.6.2.
 | Click or tap here to enter text. | Click or tap here to enter text. |
|  Note: For elevated heliports clearance from the heliport edge is shown in Figure 5.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.7 Operations in performance Class 2 |  |
| 10.7.1 Take-off and initial climb phase (Figure 6 and 7) |  |
| 1. The helicopter shall be able, in the event of the failure of the critical power- unit at any time after reaching DPATO, to continue the take-off, clearing all the obstacles along the flight path by an adequate margin until the helicopter is in a position to comply with the requirements in Paragraph 10.7.3. Before the DPATO, failure of the critical power-unit may cause the helicopter to force-land. Therefore the condition that appropriate consideration be given to achieve a safe forced landing applies.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The mass of the helicopter at take-off should not exceed the maximum take- off mass specified in the flight manual for the procedures to be used and to achieve a rate of climb of 150 ft per minute at 300 m (1000 ft) above the level of the heliport with the critical power-unit inoperative and the remaining power-units operating at an appropriate power rating, taking into account the parameters specified in Paragraph 10.2.2.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.7.2 Take-off flight path |  |
| 1. From DPATO or, as an alternative, no later than 60 m (200 ft) above the take-off surface with the critical power-unit inoperative, the conditions of Paragraph 10.6.2 shall be met.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.7.3 En route | Click or tap here to enter text. |
| 1. The requirements of Paragraph 10.6.3 shall be met.
 | Click or tap here to enter text. |  |
| 10.7.4 Approach, landing and balked landing (Figure 8 and 9). | Click or tap here to enter text. |
| 1. In the event of the failure of the critical power-unit before the DPBL, the helicopter shall, at the destination or any alternate, after clearing all obstacles, in the approach path, be either able to land and stop within the landing distance available or to perform a balked landing and clear all obstacles in the approach path by an adequate margin. After the DPBL, failure of the power-unit may cause the helicopter to force-land. Therefore the condition that appropriate consideration be given to achieve a safe forced landing applies. The estimated landing mass at the destination or alternate should be such that:
 | Click or tap here to enter text. |
| 1. It does not exceed the maximum landing mass specified in the flight manual for a rate of climb of 150ft per min at 300m (1000ft) above the level of the heliport with the critical power-unit inoperative and the remaining power-units operating at an appropriate power rating, taking into account the parameters specified in Paragraph 10.2.2.
 | อ |  |
| 1. It is possible, in case of a power-unit failure occurring at or before the DPBL, either to perform a safe forced landing or to overshoot, meeting the requirements of Paragraph 10.6.2.
 |  |  |
| 10.7.5 Operations in performance Class 2 shall take into account the obstacle accountability requirements specified in Paragraph 10.4.  |  |  |
| 10.8 Operations in performance Class 3 |  |
| 10.8.1 Take-off |  |
| 1. The mass of the helicopter at take-off shall not exceed the maximum take-off mass specified in the flight manual for a hover in ground effect with all power-units operating at take-off power, taking into account parameters specified in Paragraph 10.2.2. If the conditions are such that a hover in ground effect is not likely to be established, the take-off mass should not exceed the maximum mass specified for a hover out of ground effect with all power-units operating at take-off power, taking into account the parameters specified in Paragraph 10.2.2.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.8.2 Initial climb |  |
| 1. The take-off mass shall be such that the climb path provides adequate vertical clearance above all obstacles located along the climb path, all engines operating.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.8.3 En route |  |
| 1. The take-off mass is such that it is possible to achieve the minimum flight altitudes for the route to be flown, all engines operating. At any point of the flight path, failure of a power-unit will cause the helicopter to force-land. Therefore, the condition that appropriate consideration be given to achieve a safe forced landing applies.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 10.8.4 Approach and landing |  |
| 1. At any point of the flight path, failure of a power-unit will cause the helicopter to force-land. Therefore, the condition that appropriate consideration be given to achieve a safe forced landing applies. The estimated landing mass at the destination or alternate should be such that:
 | Click or tap here to enter text. |
| 1. it does not exceed the landing mass specified in the flight manual for a hover in ground effect with all power-units operating at take-off power, taking into account the parameters specified in 5.5.3. If conditions are such that a hover in ground is not likely to be established, the take-off mass should not exceed the maximum mass specified in a hover out of ground effect with all power-units operating at take-off power, taking into account the parameters specified in Paragraph 10.2.2; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. it is possible to perform a balked landing, all engines operating, at the point of the flight path and clear all obstacles by an adequate vertical interval.
 | 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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| **11 FLIGHTS IN VMC AT NIGHT** |
| 11.1 General |  |
| 11.1.1 A helicopter flying at night shall be flown in accordance with the IFR unless it is within control zone on a Special VFR flight. | Click or tap here to enter text. | Click or tap here to enter text. |
| 11.1.2 A helicopter flying at night shall be flown in accordance with the IFR unless it is within control zone on a Special VFR flight. | Click or tap here to enter text. | Click or tap here to enter text. |
| 11.2 Flight Crew Qualification |  |
| 11.2.1 An operator shall ensure that a pilot does not fly as pilot-in-command at night in VMC unless the pilot has: |  |
| 1. A minimum of 300 hours total flight time on helicopters which includes 100 hours as pilot-in-command and 10 hours at night as pilot flying; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Performed at least 3 take-offs, three circuits and three landings at night in the preceding 90 days;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 11.3 Weather Minima |  |
| 11.3.1 An operator shall specify in its operations manual the weather minima for VMC night flights. Minima shall be specified for the following cases: | Click or tap here to enter text. |
| 1. Where the helicopter and/or flight crew is not equipped for and capable of intentionally flying under IMC conditions; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. Where the helicopter and/or flight crew is equipped for and capable of flying under IMC conditions and subsequently making either an instrument approach to an airfield or regaining VMC.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 11.3.2 For the purpose of Paragraph 11.3.1 a), a helicopter and/or flight crew is considered capable of flying under IMC conditions if the following conditions are met:  | Click or tap here to enter text. |
| 1. The crew must be qualified for flying under IFR conditions i.e holding an instrument rating and with appropriate training and checking;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The operator has specified procedures for flights under IFR conditions;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The helicopter is equipped for IFR flight; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. The weather conditions and fuel state met the minimum requirements stated in this Manual for the intended IFR flight and any required diversion.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 11.3.3 For night flight in VMC with visual ground reference, the aircraft altitude must be capable of being assessed by reference to a clearly distinguishable external horizon that may be provided either by natural lighting or artificial lights spread deeply and widely across the track.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 11.4 Night Weather Limits |  |
| 11.4.1 For a non-IMC capable crew/helicopter combination flying in VMC at night by visual ground reference, the visibility shall not be less than 5 km and the forecast cloud base for the route shall not be less than 1500 ft above the highest terrain within 5 NM of the route. If the weather deteriorates en-route below the specified minima, the helicopter shall divert, return to the place of departure.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 11.4.2 For an IMC capable crew/helicopter combination flying in VMC at night by visual ground reference, the visibility shall not be less than 5 km and the forecast cloud base for the route shall not be less than 1200 ft above the highest terrain within 5 NM of the route. If the weather deteriorates en-route below the specified minima, the helicopter shall divert, return to the place of departure or continue the flight in IMC.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 11.4.3 An operator may operate under relaxed weather limits in very specific areas of operation such as flights that are wholly within the confines of a well illuminated urban area or a well illuminated line feature or within local areas associated with the company operating base, subject to the approval of the Authority. Operators shall demonstrate an equivalent level of safety case for consideration by the Authority and include the relevant instructions in the operations manual.  | 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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| **12 TRAINING AND TESTING** |
| 12. General |  |
| 12.1.1 The training and checking for helicopter pilots shall be based, as far as it is practicable to do so, on those for aeroplane pilots set out in Chapter 4 of the AOCR. | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.1.2 The periods of validity of the various tests are as follows: |  |
| 1. type rating Certificate of Test, Bi-annual Proficiency Checks shall be performed twice within any period of one year form the skill test with simulator or aircraft. Any two such checks which are similar and which occur within a period of four consecutive months shall not alone satisfy this requirement.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. instrument ratings test, line checks and emergency/survival checks as detailed in Chapter 6 of the AOCR are valid for 12 months.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.1.3 Pilots-in-command and co-pilots shall be checked in their respective seats unless in the case of pilots-in-command whose duties also require them to carry out duties of the co-pilot, or in the case of pilots-in-command who are required to conduct training or examining duties, in which case they shall complete their proficiency checks respectively from left to right-hand seats, on alternate proficiency checks.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.2 Line Checks | Click or tap here to enter text. |
| 12.2.1 The Operator shall ensure that the content of the line check reflects the wide variety of roles in which pilots may be engaged in. In any event the duration of the annual line check should not be less than 40 minutes.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.2.2 Conduct of the line check shall closely follow the requirements of Paragraph 3.1 of Chapter 4 of the AOCR. For pilots who are required to operate at night or under IMC, the check must include an appropriate sector and certification. The airways section of the instrument rating renewal may be counted as satisfying the IMC requirement.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.3 Proficiency Checks |  |
| 12.3.1 Proficiency Checks may embrace a VMC part and an IMC part. It is acceptable to treat the VMC and IMC parts as separate checks, each with the period of validity stated in paragraph 12.1.2a). It may be preferable to conduct the VMC part alternately by day and night, so that those items which are appropriate to night operation and those which should only be attempted in daylight are checked at least annually. Operators shall ensure that pilots comply with the Thailand Regulatory Requirement in respect of night flying recency.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.3.2 The content of a VMC competency check shall include the following items where applicable to the type of helicopter: |  |
| 1. engine failure before and after the decision point for each take off profile and each landing profile that is in use by the operator and is published in the Operations Manual;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. flight and engine control systems malfunctions for which accepted procedures are included in the Helicopter Flight Manual; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. autorotation to a designated area with powered recovery to forward or hovering flight.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.3.3 The content of the IMC competency check shall include the following items where applicable to the type of helicopter: |  |
| 1. 3D instrument approach operation to minima with, in the case of multiengine helicopters, a simulated failure of one engine;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. approach operation to minima;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. where appropriate to the helicopter type, approach with flight control system/flight director system malfunction, flight instrument and navigation equipment failures;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. at least one instrument approach should be flown with a degradation of the flight control system/auto-pilot;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. recovery from unusual attitudes and techniques for auto-rotation in IMC; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. correct crew procedures in IMC descent enroute, where applicable.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.3.4 Competency checks for handling emergencies such as tail rotor failure, double engine failure, icing problems, or situations which would be impossible or only possible with an unacceptable risk to practice in flight shall be covered in a simulator or by verbal evaluation on the ground.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.4 Instrument Approach Proficiency |  |
| 12.4.1 At least one instrument approach shall be flown in IMC conditions (either actual or simulated) proficiency to satisfy the requirements for a pilot’s instrument approach proficiency. The approach shall be carried to a position from which a successful landing could have been made and this may form part of the proficiency check.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.5 Instrument Rating (Helicopters)  |  |
| 12.5.1 The helicopter Instrument rating is valid only in respect of the helicopter type on which the test was conducted with the exception of the airways section which need only be conducted on one type in the case of a multi-type rated pilot.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.6 Proficiency Checks -Night flying in VMC conditions  |  |
| 12.6.1 The initial Proficiency Check shall be conducted at night. Thereafter, each alternate Proficiency Check shall be conducted at night. A Proficiency Check conducted at night shall qualify a pilot for both day and night operations.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.7 Low visibility take-off and Category II and III operations  |  |
| 12.7.1 An operator shall establish a training syllabus and programme for flight crew members conducting low visibility take-off, Category II and III operations. The training syllabus shall satisfy the requirements contained in Appendix U and shall be approved by the Authority. The training syllabus shall be included in the Operations Manual.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.7.2 An operator shall not assign flight crew members to conduct low visibility take-off, Category II and III operations unless they have successfully completed the training and checking requirements prescribed in the training syllabus and programme.  | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.7.3 The flight crew qualification shall be specific to the type of operation and the helicopter. | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.8 Conduct of Specialist Task Checks |  |
| 12.8.1 An operator shall establish procedures in the operations manual to conduct role checks for specialists engaged to conduct specialised tasks, including: |  |
| 1. manoeuvres in confined areas or over rough or uneven ground;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. over water operations, including winching;
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. underslung loads; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. power line “stringing”.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 12.9 Operations to Oil and Gas Installations and Vessels at Night |  |
| 12.9.1 Operators conducting operations in offshore sites shall ensure that pilots undertaking the operations are initially qualified in night deck landings and thereafter, remain recent. | Click or tap here to enter text. | Click or tap here to enter text. |
|  12.9.2 An initial night deck landing qualification will qualify a pilot to land on and depart from an installation at night. The qualification shall be valid for 12 months and may be revalidated by operating to a deck at night within the 12 month period. A pilot whose night deck recency has expired may operate to a deck at night provided he does not act as the pilot-in-command, is in-date for day deck landings and is accompanied by an experienced supervisory 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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| **13 RECENT EXPERIENCE** |
| 13.1 A pilot shall not operate a helicopter in commercial air transport or carrying passengers: |  |  |
| 1. As PIC or co-pilot unless he/she has carried out, in the preceding 90 days, at least 3 take- offs, approaches and landings in an aircraft of the same type or class or a flight simulator representing that type or class. The 3 take-offs and landings shall be performed in either multi-pilot or single-pilot operations, depending on the privileges held by the pilot; and
 | Click or tap here to enter text. | Click or tap here to enter text. |
| 1. As PIC at night unless he/ she has carried out in the preceding 90 days at least 3 take-off, approach and landing at night as a pilot flying in an aircraft of the same type or class or a flight simulator representing that type or class.
 | Click or tap here to enter text. | Click or tap here to enter text. |
| **14 ELECTRONIC FLIGHT BAG (EFBs)** |
|  the requirements for the installation of an EFB system is refer to Chapter 2, Paragraph 26A. | Click or tap here to enter text. | Click or tap here to enter text. |

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| **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) |

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| **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) |