CAR-OPS 4

GENERAL AVIATION (HELICOPTERS)

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FOREWORD

a) CAR-OPS 4 has been issued by the Civil Aviation Affairs of Oman (hereinafter called the Authority) under the provisions of the Civil Aviation Law of the Sultanate of Oman.

b) ICAO Annex 6 has been selected to provide the basic structure of CAR–OPS 4, the CAR for General Aviation (Helicopter), but with additional sub-division where considered appropriate. The content of Annex 6 has been used and added to where necessary by making use of existing European regulations (EU-OPS)

c) CAR-OPS 4 has been developed to provide requirements for General Aviation Helicopter operators, and prescribes additions, alleviations and exceptions to CAR OPS 0.

d) Amendments to the text in CAR-OPS 4 are issued as amendment pages containing revised paragraphs.

e) New, amended and corrected text will be enclosed within brackets until a subsequent 'Change' is issued

f) The editing practices used in this document are as follows:

1. 'Shall' is used to indicate a mandatory requirement and may appear in CARs.
2. 'Should' is used to indicate a recommendation
3. 'May' is used to indicate discretion by the Authority, the industry or the applicant, as appropriate.
4. 'Will' indicates a mandatory requirement and is used to advise pilots of action incumbent on the Authority.

g) Subparts of CAR-OPS 3 that have identical requirements as for CAR-OPS 4 have been incorporated by reference.

h) Where applicable, CAR-OPS 3 Section 2 AMC's, ACJ's and IEM's have been incorporated by reference

NOTE: The use of the male gender implies the female gender and vice versa

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SUBPART A – APPLICABILITY

CAR-OPS 4.001 Applicability

(See Appendix 1 to CAR-OPS 4.001(c))

(a) CAR-OPS 4 prescribes requirements for the purpose of helicopter general aviation air transportation by any operator whose principal office is in the Sultanate of Oman, and is applicable to the operation of:

(1) Any civil helicopter, registered in the Sultanate of Oman, having a maximum take-off mass of 3 175 kg. or more; and

(2) Any civil helicopter, registered in the Sultanate of Oman, having an approved seating configuration of 9 or more seats, excluding any required flight crew member seat; and

(b) CAR-OPS 4 does not apply to aerial work operations and agricultural operations.

(c) Operations with helicopters with a maximum approved passenger seating configuration (MAPSC) of 9 or less; by day; over routes navigated by reference to visual landmarks; and conducted within a local and defined geographical area acceptable to the Authority, which are intended to start and end at the same location (or at another location acceptable to the Authority within the local area) on the same day, shall be conducted in accordance with the requirements contained in CAR-OPS 4 except for the variations contained in Appendix 1 to CAR OPS 3.005(c) for which a specific approval is required.

CAR-OPS 4.003 Operating rules

The holder of a general aviation helicopter operating certificate shall comply with the requirements of CAR-OPS 0 unless otherwise specified in this CAR.

CAR-OPS 4.004 Terminology

For the purpose of this CAR *General Aviation* means:
A helicopter operation other than:

- (1) a commercial air transport operation,
- (2) an aerial work operation (Commercial)
- (3) an agricultural operation.

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Appendix 1 to CAR-OPS 4.005(c) Local area operations (VFR day only)

(a) *Approval*. An operator wishing to conduct operations in accordance with this Appendix must have the prior approval of the Authority issuing the AOC. Such an approval will specify:

(1) The type of helicopter

(2) Type of operation

(3) The geographical limitations of operations in the context of this appendix.

(b) *Prohibition*. The following activities are prohibited:

(1) CAR-OPS 4.065. Carriage of weapons of war and munitions of war, unless authorised as per CAR-OPS 0.015.

(2) CAR-OPS 4.265. Carriage of inadmissible passengers, deportees or persons in custody.

(3) CAR-OPS 4.305. Refuelling/defuelling with passengers embarking, on board or disembarking.

(4) CAR-OPS 4.335. Smoking on board.

(c) *Alleviation*. The following rules are alleviated:

(1) CAR-OPS 4.135 Additional information and forms to be carried.

(i) CAR-OPS 4.135(a)(1) - Operational Flight Plan. The flight plan may be in a simplified form, relevant to the kind of operations conducted and acceptable to the Authority.

(ii) CAR-OPS 4.135(a)(4) - Notam/AIS documentation. Are not required.

(iii) CAR-OPS 4.135(a)(5) - Meteorological information. Is not required.

(iv) CAR-OPS 4.135(a)(7) - Notification of special passengers, etc. Is not required.

(v) CAR-OPS 4.135(a)(8) - Notification of special loads, etc. Is not required.

(2) CAR-OPS 4.140 Information retained on the ground. Information need not be retained on the ground when other methods of recording are employed.

(3) CAR-OPS 4.215 Use of Air Traffic Services. Not applicable unless mandated by air space requirements and providing search and rescue service arrangements are acceptable to the Authority.

(4) CAR-OPS 4220 Authorisation of Heliports by the operator. An operator shall establish a procedure to qualify the Commanders for the selection of heliports or landing sites, suitable for the type of helicopter and the type of operation.

(5) CAR-OPS 4.255 Fuel policy. Subparagraphs (b) to (d) are not applicable when the fuel policy prescribed in CAR-OPS 3.255(a) ensures that, on completion of the flight, or series of flights, the fuel remaining is not less than an amount of fuel sufficient for 30 minutes flying time at normal cruising (this may be reduced to 20 minutes when operating within an area providing continuous and suitable precautionary landing sites). Final reserve fuel must be established in the operations manual in order to be able to comply with CAR-OPS 3.375(c).

(6) CAR-OPS 4.290(a). See (C)(1)(i) above.

(7) CAR-OPS 4.375 In-flight fuel management. Appendix 1 to CAR-OPS 3.375 need not be applied (see (c)(10) below).

(8) Appendix 1 to CAR-OPS 4.375 In-flight fuel management. Not applicable.

9) Appendix 1 to CAR-OPS 4.775 Supplemental oxygen for non-pressurised helicopters. Not applicable in accordance with (9) & (12) above.

(10) CAR-OPS 4.1060 Operational flight plan. See (c)(1)(i) above.

SUBPART B.–.GENERAL

The requirements in this Subpart are supplementary to the requirements of CAR-OPS 0 Subpart B

CAR-OPS 4.005 General

(a) Each helicopter shall be operated in compliance with the terms of its Certificate of Airworthiness and within the approved limitations contained in its Helicopter Flight Manual.

(b) All Synthetic Training Devices (STD), such as Flight Simulators or Flight Training Devices (FTD), replacing an helicopter for training and/or checking purposes are to be qualified in accordance with CAR-STD requirements and user approved by the Authority for the exercises to be conducted.

CAR-OPS 4.010 Exemptions

The Authority may exceptionally and temporarily grant an exemption from the provisions of CAR-OPS 4 when satisfied that there is a need and subject to compliance with any supplementary condition the Authority considers necessary in order to ensure an acceptable level of safety in the particular case.

CAR-OPS 4.015 Operational Directives

(a) The Authority may direct by means of an Operational Directive that an operation shall be prohibited, limited or subject to certain conditions, in the interests of safe operations.

(b) Operational Directives state:

(1) the reason for issue;

(2) applicability and duration; and

(3) action required by the operator(s).

(c) Operational Directives are supplementary to the provisions of CAR-OPS 4.

CAR-OPS 4.020 Laws, Regulations and Procedures – Operator's Responsibilities

(a) An operator must ensure that:

(1) all employees are made aware that they shall comply with the laws, regulations and procedures of those States in which operations are conducted and which are pertinent to the performance of their duties; and

(2) all crew members are familiar with the laws, regulations and procedures pertinent to the performance of their duties.

CAR-OPS 4.025 Common Language

(a) An operator must ensure that all crew members can communicate in a common language.

(b) An operator must ensure that all operations personnel are able to understand the language in which those parts of the Operations Manual which pertain to their duties and responsibilities are written.

CAR-OPS 4.030 Minimum Equipment Lists – Operator's Responsibilities

(a) An operator shall establish, for each helicopter, a Minimum Equipment List (MEL) approved by the Authority. This shall be based upon, but no less restrictive than, the relevant Master Minimum Equipment List (MMEL) (if this exists) accepted by the Authority.

(b) An operator shall not operate a helicopter other than in accordance with the MEL unless permitted by the Authority. Any such permission will in no circumstances permit operation outside the constraints of the MMEL.

CAR-OPS 4.035 Quality system

(a) An operator shall establish one Quality System and designate one Quality Manager to monitor compliance with, and the adequacy of, procedures required to ensure safe operational practices and airworthy helicopters. Compliance monitoring must include a feed-back system to the Accountable Manager to ensure corrective action as necessary.

(b) The Quality System must include a Quality Assurance Programme that contains procedures designed to verify that all operations are being conducted in accordance with all applicable requirements, standards and procedures.

(c) The Quality System and the Quality Manager must be acceptable to the Authority.

(d) The quality system must be described in relevant documentation.

(e) Notwithstanding sub-paragraph (a) above, the Authority may accept the nomination of two Quality Managers, one for operations and one for maintenance, provided that the operator has designated one Quality Management Unit to ensure that the Quality System is applied uniformly throughout the entire operation.

Note 1 See CAR-OPS 3, AMC OPS 3.035 for acceptable means of compliance

Note 2: The Quality system must, as a minimum, meet the CAR-OPS 3 requirements for small operators as specified in CAR-OPS 3, AMC OPS 3.035 par. 7.

Note 3: This requirement does not apply to operators with a full time employed staff of less than 20 employees directly connected to the operation (crew, engineers, dispatchers)

[CAR-OPS 4.037 Safety Management System]

(a) An operator shall establish a [Safety Management System] programme **[** in accordance with ICAO SMS Document 9859**],** which may be integrated with the Quality System, including:

(1) Programmes to achieve and maintain risk awareness by all persons involved in operations; and

(2) An occurrence reporting scheme to enable the collation and assessment of relevant incident and accident reports in order to identify adverse trends or to address deficiencies in the interests of flight safety. The scheme shall protect the identity of the reporter and include the possibility that reports may be submitted anonymously and

(3) Evaluation of relevant information relating to incidents and accidents and the promulgation of related information, but not the attribution of blame; and

(4) The appointment of a person accountable for managing the programme.

(b) Proposals for corrective action resulting from the accident prevention and flight safety programme shall be the responsibility of the person accountable for managing the programme.

(c) The effectiveness of changes resulting from proposals for corrective action identified by the accident and flight safety programme shall be monitored by the Quality Manager.

Note 1: This requirement does not apply to operators with a full time employed staff of less than 20 employees directly connected to the operation.

Rev 2

CAR-OPS 4.040 Additional crew members

An operator shall ensure that crew members who are not required flight or cabin crew members, have also been trained in, and are proficient to perform, their assigned duties.

CAR-OPS 4.050 Search and rescue information

An operator shall ensure that essential information pertinent to the intended flight concerning search and rescue services is easily accessible on the flight deck.

CAR-OPS 4.055 Information on emergency and survival equipment carried

An operator shall ensure that there are available for immediate communication to rescue coordination centres, lists containing information on the emergency and survival equipment carried on board all of his helicopters. The information shall include, as applicable, the number, colour and type of life-rafts and pyrotechnics, details of emergency medical supplies, water supplies and the type and frequencies of emergency portable radio equipment.

CAR-OPS 4.085 Crew responsibilities

(a) A crew member shall be responsible for the proper execution of his duties that:

(1) are related to the safety of the helicopter and its occupants; and

(2) are specified in the instructions and procedures laid down in the Operations Manual.

(b) A crew member shall:

(1) report to the commander any fault, failure, malfunction or defect which he believes may affect the airworthiness or safe operation of the helicopter including emergency systems.

(2) report to the commander any incident that endangered, or could have endangered, the safety of operation; and

(c) Nothing in paragraph (b) above shall oblige a crew member to report an occurrence which has already been reported by another crew member.

(d) A crew member shall not perform duties on a helicopter:

(1) While under the influence of any drug that may affect his faculties in a manner contrary to safety;

(2) Until 24 hours has elapsed after deep water diving;

(3) Following blood donation except when 24 hours has elapsed;

(4) If he is in any doubt of being able to accomplish his assigned duties; or

(5) If he knows or suspects that he is suffering from fatigue, or feels unfit to the extent that the flight may be endangered.

(e) A crew member shall not:

(1) Consume alcohol less than 12 hours prior to the specified reporting time for flight duty or the commencement of standby;

(2) Commence a flight duty period with a blood alcohol level in excess of 0·2 promille;

(3) Consume alcohol during the flight duty period or whilst on standby.

(f) The Pilot in Command shall:

(1) Be responsible for the safe operation of the helicopter and safety of its occupants during flight time;

(2) Have authority to give all commands he deems necessary for the purpose of securing the safety of the helicopter and of persons or property carried therein;

(3) Have authority to disembark any person, or any part of the cargo, which, in his opinion, may represent a potential hazard to the safety of the helicopter or its occupants;

(4) Not allow a person to be carried in the helicopter who appears to be under the influence of alcohol or drugs to the extent that the safety of the helicopter or its occupants is likely to be endangered;

(5) Have the right to refuse transportation of inadmissible passengers, deportees or persons in custody if their carriage poses any risk to the safety of the helicopter or its occupants;

(6) Ensure that all passengers are briefed on the location of emergency exits and the location and use of relevant safety and emergency equipment;

(7) Ensure that all operational procedures and check lists are complied with in accordance with the Operations Manual;

(8) Not permit any crew member to perform any activity during take-off, initial climb, final approach and landing except those duties required for the safe operation of the helicopter;

(9) Not permit:

(i) A flight data recorder to be disabled, switched off or erased during flight nor permit recorded data to be erased after flight in the event of an accident or an incident subject to mandatory reporting;

(ii) A cockpit voice recorder to be disabled or switched off during flight unless he believes that the recorded data, which otherwise would be erased automatically, should be preserved for incident or accident investigation nor permit recorded data to be manually erased during or after flight in the event of an accident or an incident subject to mandatory reporting;

(10) Decide whether or not to accept an helicopter with unserviceabilities allowed by the CDL or MEL; and

(11) Ensure that the pre-flight inspection has been carried out.

(g) The Pilot in Command or the pilot to whom conduct of the flight has been delegated shall, in an emergency situation that requires immediate decision and action, take any action he considers necessary under the circumstances. In such cases he may deviate from rules, operational procedures and methods in the interest of safety.

CAR-OPS 4.100 Admission to flight deck

(a) An operator must ensure that no person, other than a flight crew member assigned to a flight, is admitted to, or carried in, the flight deck unless that person is:

(1) An operating crew member;

(2) A representative of the Authority responsible for certification, licensing or inspection if this is required for the performance of his official duties; or

(3) Permitted by, and carried in accordance with instructions contained in the Operations Manual.

(b) The Pilot in Command shall ensure that:

(1) In the interests of safety, admission to the flight deck does not cause distraction and/or interfere with the flight's operation; and

(2) All persons carried on the flight deck are made familiar with the relevant safety procedures.

(c) The final decision regarding the admission to the flight deck shall be the responsibility of the Pilot in Command.

CAR-OPS 4.120 Endangering safety

(a) An operator shall take all reasonable measures to ensure that no person recklessly or negligently acts or omits to act:

(1) So as to endanger a helicopter or person therein;

(2) So as to cause or permit a helicopter to endanger any person or property.

CAR-OPS 4.130 Manuals to be carried

(a) An operator shall ensure that:

(1) The current parts of the Operations Manual relevant to the duties of the crew are carried on each flight;

(2) Those parts of the Operations Manual which are required for the conduct of a flight are easily accessible to the crew on board the helicopter; and

(3) The current Helicopter Flight Manual is carried in the helicopter unless the Authority has accepted that the Operations Manual prescribed in CAR-OPS 4.1045, Appendix 1, Part B contains relevant information for that helicopter.

CAR-OPS 4.135 Additional information and forms to be carried

(a) An operator shall ensure that, in addition to the documents and manuals prescribed in CAR-OPS 4.125 and CAR-OPS 4.130, the following information and forms, relevant to the type and area of operation, are carried on each flight:

(1) Operational Flight Plan containing the information required in CAR-OPS 0.285/0.335;

(2) Helicopter Technical Log

(3) Details of the filed ATS flight plan;

(4) Appropriate NOTAM/AIS briefing documentation;

(5) Appropriate meteorological information;

(6) Mass and balance documentation as specified in Subpart J;

(7) Notification of special categories of passenger such as security personnel, if not considered as crew, handicapped persons, inadmissible passengers, deportees and persons in custody;

(8) Notification of special loads including dangerous goods including written information to the Pilot in Command.

(9) Current maps and charts and associated documents as prescribed in

CAR-OPS 4.290(b)(7);

(10) Any other documentation which may be required by the States concerned with this flight, such as cargo manifest, passenger manifest etc; and

(11) Forms to comply with the reporting requirements of the Authority and the operator.

(b) The Authority may permit the information detailed in sub-paragraph (a) above, or parts thereof, to be presented in a form other than on printed paper. An acceptable standard of accessibility, usability and reliability must be assured.

Note 1 Operational Flight Plan.
The flight plan may be in a simplified form, relevant to the kind of operations conducted and acceptable to the Authority.

Note 2 Notification of special passengers is not required for local flights.

CAR-OPS 4.140 Information retained on the ground

(a) An operator shall ensure that:

(1) At least for the duration of each flight or series of flights;

(i) Information relevant to the flight and appropriate for the type of operation is preserved on the ground; and

(ii) The information is retained until it has been duplicated at the place at which it will be stored in accordance with CAR-OPS 4.1065; or, if this is impracticable,

(iii) The same information is carried in a fireproof container in the helicopter.

(b) The information referred to in subparagraph (a) above includes:

(1) A copy of the operational flight plan where appropriate;

(2) Copies of the relevant part(s) of the helicopter technical log;

(3) Route specific NOTAM documentation if specifically edited by the operator;

(4) Mass and balance documentation if required (CAR-OPS 4.625 refers); and

(5) Special loads notification.

CAR-OPS 4.145 Power to inspect

An operator shall ensure that any person authorised by the Authority is permitted at any time to board and fly in any helicopter operated in accordance with an AOC issued by that Authority and to enter and remain on the flight deck provided that the Pilot in Command may refuse access to the flight deck if, in his opinion, the safety of the helicopter would thereby be endangered.

CAR-OPS 4.150 Production of documentation and records

(a) An operator shall:

(1) Give any person authorised by the Authority access to any documents and records which are related to flight operations or maintenance; and

(2) Produce all such documents and records, when requested to do so by the Authority, within a reasonable period of time.

(b) The Pilot in Command shall, within a reasonable time of being requested to do so by a person authorised by an Authority, produce to that person the documentation required to be carried on board.

CAR-OPS 4.155 Preservation of documentation

(a) An operator shall ensure that:

(1) Any original documentation, or copies thereof, that he is required to preserve is preserved for the required retention period even if he ceases to be the operator of the helicopter; and

(2) Where a crew member, in respect of whom an operator has kept a record in accordance with Subpart Q, becomes a crew member for another operator, that record is made available to the new operator.

CAR-OPS 4.160 Preservation, production and use of flight recorder recordings

(a) *Preservation of recordings*

(1) Following an accident, the operator of a helicopter on which a flight recorder is carried shall, to the extent possible, preserve the original recorded data pertaining to that accident, as retained by the recorder for a period of 60 days unless otherwise directed by the investigating Authority.

(2) Unless prior permission has been granted by the Authority, following an incident that is subject to mandatory reporting, the operator of a helicopter on which a flight recorder is carried shall, to the extent possible, preserve the original recorded data pertaining to that incident, as retained by the recorder for a period of 60 days unless otherwise directed by the Authority.

(3) Additionally, when the Authority so directs, the operator of a helicopter on which a flight recorder is carried shall preserve the original recorded data for a period of 60 days unless otherwise directed by the investigating Authority.

(4) When a flight data recorder is required to be carried aboard a helicopter, the operator of that helicopter shall:

(i) Save the recordings for the period of operating time as required by CAR-OPS 4 Subpart K except that, for the purpose of testing and maintaining flight data recorders, up to one hour of the oldest recorded material at the time of testing may be erased; and

(ii) Keep a document which presents the information necessary to retrieve and convert the stored data into engineering units.

(b) *Production of recordings.* The operator of a helicopter on which a flight recorder is carried shall, within a reasonable time after being requested to do so by the Authority, produce any recording made by a flight recorder which is available or has been preserved.

(c) *Use of recordings*

(1) The cockpit voice recorder recordings may not be used for purposes other than for the investigation of an accident or incident subject to mandatory reporting except with the consent of all crew members concerned.

(2) The flight data recorder recordings may not be used for purposes other than for the investigation of an accident or incident subject to mandatory reporting except when such records are:

(i) Used by the operator for airworthiness or maintenance purposes only; or

(ii) De-identified; or

(iii) Disclosed under secure procedures.

SUBPART C – CERTIFICATION

The requirements of CAR-OPS 3, Subpart C are applicable.

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SUBPART D – OPERATIONAL PROCEDURES

The requirements in this Subpart are supplementary to the requirements of CAR-OPS 0 Subpart D and Subpart E.

CAR-OPS 4.195 Operational Control

An operator shall:

(a) Establish and maintain a method of exercising operational control approved by the Authority; and

(b) Exercise operational control over any flight operated under the terms of his AOC.

For the purpose of this paragraph operational control means the exercise by the operator, in the interest of safety, of responsibility for the initiation, continuation, termination or diversion of a flight. This does not imply a requirement for licensed flight dispatchers or a full flight watch system.

The organisation and methods established to exercise operational control shall be included in the operations manual and must cover at least a description of responsibilities concerning the initiation, continuation, termination or diversion of each flight.

CAR-OPS 4.200 Operations manual

An operator shall provide an Operations Manual in accordance with Subpart P for the use and guidance of operations personnel.

CAR-OPS 4.205 Competence of operations personnel

An operator shall ensure that all personnel assigned to, or directly involved in, ground and flight operations are properly instructed, have demonstrated their abilities in their particular duties and are aware of their responsibilities and the relationship of such duties to the operation as a whole.

CAR-OPS 4.210 Establishment of procedures

(a) An operator shall establish procedures and instructions, for each helicopter type, containing ground staff and crew members' duties for all types of operation on the ground and in flight.

(b) An operator shall establish a check-list system to be used by crew members for all phases of operation of the helicopter under normal, abnormal and emergency conditions as applicable, to ensure that the operating procedures in the Operations Manual are followed.

(c) An operator shall not require a crew member to perform any activities during critical phases of the flight other than those required for the safe operation of the helicopter.

Note: See CAR-OPS 3, AMC OPS 3.210(a), IEM OPS 3.210(b) for acceptable means of compliance

CAR-OPS 4.225 Heliport Operating Minima
(See Appendix 1 to CAR-OPS 4.225)

(a) An operator shall specify heliport operating minima, established in accordance with Appendix 1 to CAR-OPS 4.225 for each departure, destination or alternate heliport authorised to be used in accordance with CAR-OPS 4.220.

(b) Any increment imposed by the Authority must be added to the minima specified in accordance with sub-paragraph (a) above.

(c) The minima for a specific type of approach and landing procedure are considered applicable if:

(1) the ground equipment shown on the respective chart required for the intended procedure is operative;

(2) the helicopter systems required for the type of approach are operative;

(3) the required helicopter performance criteria are met; and

(4) the crew is qualified accordingly..

CAR-OPS 4.235 Noise abatement procedures

An operator shall ensure that take-off and landing procedures take into account the need to minimize the effect of helicopter noise.

CAR-OPS 4.240 Routes and areas of operation

(a) An operator shall ensure that operations are only conducted along such routes or within such areas, for which:

(1) ground facilities and services, including meteorological services, are provided which are adequate for the planned operation;

(2) the performance of the helicopter intended to be used is adequate to comply with minimum flight altitude requirements;

(3) the equipment of the helicopter intended to be used meets the minimum requirements for the planned operation;

(4) Appropriate maps and charts are available (CAR-OPS 4.135(a)(9) refers);

(5) For helicopters operated in Performance Class 3, surfaces are available which permit a safe forced landing to be executed, except when the helicopter has an q approval to operate in accordance with Appendix 1 to CAR-OPS 4.005(e).

(b) An operator shall ensure that operations are conducted in accordance with any restriction on the routes or the areas of operation, imposed by the Authority.

CAR-OPS 4.255 Fuel policy

(a) An operator must establish a fuel policy for the purpose of flight planning and in-flight re-planning to ensure that every flight carries sufficient fuel for the planned operation and reserves to cover deviations from the planned operation.

(b) An operator shall ensure that the planning of flights is at least based upon (1) and (2) below:

(1) Procedures contained in the Operations Manual and data derived from:

(i) Data provided by the helicopter manufacturer; or

(ii) Current helicopter specific data derived from a fuel consumption monitoring system.

(2) The operating conditions under which the flight is to be conducted including:

(i) Realistic helicopter fuel consumption data;

(ii) Anticipated masses;

(iii) Expected meteorological conditions; and

(iv) Air Traffic Services procedures and restrictions.

(c) An operator shall ensure that the pre-flight calculation of usable fuel required for a flight includes:

(1) Taxy fuel;

(2) Trip fuel;

(3) Reserve fuel consisting of:

(i) Contingency fuel

(ii) Alternate fuel, if a destination alternate is required. (This does not preclude selection of the departure heliport as the destination alternate);

(iii) Final reserve fuel; and

(iv)Additional fuel, if required by the type of operation (e.g. isolated heliports); and

(4) Extra fuel if required by the Pilot in Command.

(d) An operator shall ensure that in-flight re-planning procedures for calculating usable fuel required when a flight has to proceed along a route or to a destination other than originally planned includes:

(1) Trip fuel for the remainder of the flight;

(2) Reserve fuel consisting of:

(i) Contingency fuel;

(ii) Alternate fuel, if a destination alternate is required. (This does not preclude selection of the departure heliport as the destination alternate);

(iii) Final reserve fuel; and

(iv) Additional fuel, if required by the type of operation (e.g. ETOPS); and

(3) Extra fuel if required by the Pilot in Command.

Note: See CAR-OPS 3, AMC OPS 3.255 for acceptable means of compliance

CAR-OPS 4.290 Flight preparation

(a) An operator shall ensure that an operational flight plan is completed for each intended flight.

(b) The Pilot in Command shall not commence a flight unless he is satisfied that:

(1) the helicopter is airworthy;

(2) the helicopter is not operated contrary to the provisions of the Configuration Deviation List (CDL);

(3) the instruments and equipment required for the flight to be conducted, available;

(4) the instruments and equipment are in operable condition except as provided in the MEL;

(5) those parts of the operations manual which are required for the conduct of the flight are available;

(6) the documents, additional information and forms required to be available by CAR-OPS 4.125 and CAR-OPS 4.135 are on board;

(7) current maps, charts and associated documentation or equivalent data are available to cover the intended operation of the helicopter including any diversion which may reasonably be expected;

(8) ground facilities and services required for the planned flight are available and adequate;

(9) the provisions specified in the operations manual in respect of fuel, oil and oxygen requirements, minimum safe altitudes, heliport operating minima and availability of alternate heliports, where required, can be complied with for the planned flight;

(10) the load is properly distributed and safely secured;

(11) the mass of the helicopter, at the commencement of take-off, will be such that the flight can be conducted in compliance with Subparts F to I as applicable; and

(12) any operational limitation in addition to those covered by sub-paragraphs (9) and (11) above can be complied with.

CAR-OPS 4.295 Selection of heliports

(a) An operator shall establish procedures for the selection of destination and/or alternate heliports in accordance with CAR-OPS 4.220 when planning a flight.

(b) The Pilot in Command must select a take-off alternate within one hour flight time at normal cruise speed for a flight under instrument meteorological conditions if it would not be possible to return to the heliport of departure due to meteorological reasons.

(c) For a flight to be conducted in accordance with the Instrument Flight Rules or when flying VFR and navigating by means other than by reference to visual landmarks, the Pilot in Command shall specify at least one alternate in the operational flight plan unless:

(1) The destination is a coastal heliport (See AMC OPS 3.295(c)(1) and IEM OPS 3.295(c)(

(2) For a flight to any other land destination, the duration of the flight and the meteorological conditions prevailing are such that, at the estimated time of arrival at the heliport of intended landing, an approach and landing may be made under visual meteorological conditions as prescribed by the Authority; or

(3) The heliport of intended landing is isolated and no alternate is available. A Point of No Return (PNR) shall be determined.

(d) Off-shore alternates may be specified subject to the following (see AMC OPS 3.295(e) and IEM OPS 3.295(e)):

(1) An off-shore alternate shall be used only after a Point of No Return (PNR). Prior to PNR, on-shore alternates shall be used.

(2) One engine inoperative landing capability shall be attainable at the alternate.

(3) Deck availability shall be guaranteed. The dimensions, configuration and obstacle clearance of individual helidecks or other sites shall be assessed inorder to establish operational suitability for use as an alternate by each helicopter type proposed to be used.

(4) Weather minima shall be established taking accuracy and reliability of meteorological information into account (see IEM OPS 3.295(e)(4)).

(5) The Minimum Equipment List shall reflect essential requirements for this type of operation.

(6) An off-shore alternate shall not be selected unless the operator has published a procedure in the Operations Manual approved by the Authority.

(e) An operator shall specify any required alternate(s) in the operational flight plan.

CAR-OPS 4.305 Refuelling/defuelling with passengers embarking, on board or disembarking

(See Appendix 1 to CAR-OPS 4.305)

An operator shall ensure that no helicopter is refuelled/defuelled with Avgas or wide cut type fuel (e.g. Jet-B or equivalent) or when a mixture of these types of fuel might occur, when passengers are embarking, on board or disembarking. In all other cases necessary precautions must be taken and the helicopter must be properly manned by qualified personnel ready to initiate and direct an evacuation of the helicopter by the most practical and expeditious means available.

CAR-OPS 4.307 Refuelling/defuelling with wide-cut fuel

An operator shall establish procedures for refuelling/defuelling with wide-cut fuel (e.g. Jet-B or equivalent) if this is required.

Note: See CAR-OPS 3, IEM OPS 3.307 for acceptable means of compliance

CAR-OPS 4.335 Smoking on board

(a) The Pilot in Command shall ensure that no person on board is allowed to smoke:

(1) whenever deemed necessary in the interest of safety;

(2) while the helicopter is on the ground unless specifically permitted in accordance with procedures defined in the Operations Manual;

(3) outside designated smoking areas, in the aisle(s) and in the toilet(s);

(4) in cargo compartments and/or other areas where cargo is carried which is not stored in flame resistant containers or covered by flame resistant canvas; and

(5) in those areas of the cabin where oxygen is being supplied.

CAR-OPS 4.345 Ice and other contaminants – ground procedures

(a) An operator shall establish procedures to be followed when ground de-icing and anti-icing and related inspections of the helicopter(s) are necessary.

(b) A Pilot in Command shall not commence take-off unless the external surfaces are clear of any deposit which might adversely affect the performance and/or controllability of the helicopter except as permitted in the Helicopter Flight Manual.

CAR-OPS 4.346 Ice and other contaminants – flight procedures

(a) An operator shall establish procedures for flights in expected or actual icing conditions

(b) A Pilot in Command shall not commence a flight nor intentionally fly into expected or actual icing conditions unless the helicopter is certificated and equipped to cope with such conditions.

CAR-OPS 4.350 Fuel and oil supply

A Pilot in Command shall not commence a flight unless he is satisfied that the helicopter carries at least the planned amount of fuel and oil to complete the flight safely, taking into account the expected operating conditions.

CAR-OPS 4.355 Take-off conditions

Before commencing take-off, a Pilot in Command must satisfy himself that, according to the information available to him, the weather at the heliport and the condition of the FATO intended to be used should not prevent a safe take-off and landing.

CAR-OPS 4.360 Application of take-off minima

Before commencing take-off, a Pilot in Command must satisfy himself that the RVR / visibility
and the ceiling in the take-off direction of the helicopter is equal to or better than the applicable minimum.

CAR-OPS 4.365 Minimum flight altitudes

The Pilot in Command or the pilot to whom conduct of the flight has been delegated shall not fly below specified minimum altitudes except when necessary for take-off or landing.

CAR-OPS 4.370 Simulated abnormal situations in flight

An operator shall establish procedures to ensure that abnormal or emergency situations requiring the application of part or all of abnormal or emergency procedures and simulation of IMC by artificial means, are not simulated during transportation flights.

CAR-OPS 4.375 In-flight fuel management

(a) An operator shall establish a procedure to ensure that in-flight fuel checks and fuel management are carried out.

(b) A Pilot in Command shall ensure that the amount of usable fuel remaining in flight is not less than the fuel required to proceed to a heliport where a safe landing can be made, with final reserve fuel remaining.

(c) The Pilot in Command shall declare an emergency when the actual usable fuel on board is less than final reserve fuel.

CAR-OPS 4.395 Ground proximity detection

When undue proximity to the ground is detected by any flight crew member or by a ground proximity warning system, the Pilot in Command or the pilot to whom conduct of the flight has been delegated shall ensure that corrective action is initiated immediately to establish safe flight conditions.

CAR-OPS 4.398 Use of Airborne Collision Avoidance System (ACAS)

(a) An operator shall establish procedures to ensure that when ACAS is installed and serviceable, it shall be used in flight in a mode that enables Traffic Advisories (TA) to be displayed.

(b) Operators of aircraft equipped with ACAS shall establish standards of training and operation before authorizing crews to use ACAS.

(c) The ACAS operational procedures and training programmes established by the operator should take into account:

ICAO Annex 10 Volume 4;

ICAO Doc 8168 PANS OPS Volume 1;

. ICAO Doc 4444 PANS RAC Part X paragraph 3.1.2; and

. ICAO guidance material "ACAS Performance - Based Training Objectives" (published under Attachment E to State letter AN 7/1.3.7.2-97/77.)

CAR-OPS 4.400 Approach and landing conditions

Before commencing an approach to land, the Pilot in Command must satisfy himself that, according t the information available to him, the weather at the heliport and the condition of the FATO intended to be used should not prevent a safe approach, landing or missed approach, having regard to the performance information contained in the Operations Manual.

CAR-OPS 4.405 Commencement and continuation of approach

(a) The Pilot in Command or the pilot to whom conduct of the flight has been delegated may commence an instrument approach regardless of the reported RVR/Visibility but the approach shall not be continued beyond the outer marker, or equivalent position, if the reported RVR/visibility is less than the applicable minima.
The 'equivalent position' can be established by means of a DME distance, a suitably located NDB or VOR, SRE or PAR fix or any other suitable fix that independently establishes the position of the helicopter.

(b) Where RVR is not available, RVR values may be derived by converting the reported visibility in accordance with the table below.

\

Lighting elements in operation	RVR= Reported Met. Visibility x	
	Day	Night
HI approach and runway lighting	1·5	2·0
Any type of lighting installation other than above	1·0	1·5
No lighting	1·0	Not applicable

(c) If, after passing the outer marker or equivalent position in accordance with (a) above, the reported RVR/visibility falls below the applicable minimum, the approach may be continued to DA/H or MDA/H.

(d) Where no outer marker or equivalent position exists, the Pilot in Command or the pilot to whom conduct of the flight has been delegated shall make the decision to continue or abandon the approach before descending below 1000 ft above the heliport on the final approach segment. If the MDA/H is at or above 1000 ft above the heliport, the operator shall establish a height, for each approach procedure, below which the approach shall not be continued if the RVR/visibility is less than the applicable minima.

(e) The approach may be continued below DA/H or MDA/H and the landing may be completed provided that the required visual reference is established at the DA/H or MDA/H and is maintained.

CAR-OPS 4.420 Occurrence reporting

(a) *Terminology*

(1) *Incident.* An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

(2) *Serious Incident* An incident involving circumstances indicating that an accident nearly occurred.

(3) *Accident* An occurrence associated with the operation of an helicopter which takes place between the time any person boards the aircraft with the intention of flight until such time as all persons have disembarked, in which:

(i) a person is fatally or seriously injured as a result of:

(A) being in the helicopter;

(B) direct contact with any part of the helicopter, including parts which have become detached from the helicopter; or,

(C) direct exposure to jet blast;

except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew: or

(ii) the helicopter sustains damage or structural failure which adversely affects the structural strength, performance or flight characteristics of the helicopter; and would normally require major repair or replacement of the affected component; except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to antennas, tyres, brakes, fairings, small dents or puncture holes in the helicopter skin: or

(iii) the helicopter is missing or is completely inaccessible.

(b) *Incident Reporting* An operator shall establish procedures for reporting incidents taking into account responsibilities described below and circumstances described in sub-paragraph (d) below.

(1) CAR-OPS 4.085(b) specifies the responsibilities of crew members for reporting incidents that endanger, or could endanger, the safety of operation.

(2) The Pilot in Command or the operator of a helicopter shall submit a report to the Authority of any incident that endangers or could endanger the safety of operation.

(3) Reports must be despatched within 72 hours of the time when the incident was identified unless exceptional circumstances prevent this.

(4) A Pilot in Command shall ensure that all known or suspected technical defects and all exceedances of technical limitations occurring while he was responsible for the flight are recorded in the helicopter technical log. If the deficiency or exceedance of technical limitations endangers or could endanger the safety of operation, the Pilot in Command must in addition initiate the submission of a report to the Authority in accordance with paragraph (b)(2) above.

(5) In the case of incidents reported in accordance with sub- paragraphs (b)(1), (b)(2) and (b)(3) above, arising from, or relating to, any failure, malfunction or defect in the helicopter, its equipment or any item of ground support equipment, or which cause or might cause adverse effects on the continuing airworthiness of the helicopter, the operator must also inform the organisation responsible for the design or the supplier or, if applicable, the organisation responsible for continued airworthiness, at the same time as a report is submitted to the Authority.

(c) *Accident and Serious Incident Reporting* An operator shall establish procedures for reporting accidents and serious incidents taking into account responsibilities described below and circumstances described in sub-paragraph (d) below.

(1) A Pilot in Command shall notify the operator of any accident or serious incident occurring while he was responsible for the flight. In the event that the Pilot in Command is incapable of providing such notification, this task shall be undertaken by any other member of the crew if they are able to do so, note being taken of the succession of command specified by the operator.

(2) An operator shall ensure that the Authority, the nearest appropriate Authority (if not the Authority), and any other organisation required by the Sultanate of Oman to be informed, are notified by the quickest means available of any accident or serious incident and - in the case of accidents only - at least before the helicopter is moved unless exceptional circumstances prevent this.

(3) The Pilot in Command or the operator of an helicopter shall submit a report to the Authority within 72 hours of the time when the accident or serious incident occurred.

(d) *Specific Reports.* Occurrences for which specific notification and reporting methods must be used are described below;

(1) *Air Traffic Incidents* A Pilot in Command shall without delay notify the air traffic service unit concerned of the incident and shall inform them of his intention to submit an air traffic incident report after the flight has ended whenever an helicopter in flight has been endangered by:

(i) A near collision with any other flying device;

(ii) Faulty air traffic procedures or lack of compliance with applicable procedures by air traffic services or by the flight crew;

(iii) Failure of air traffic services facilities.

In addition, the Pilot in Command shall notify the Authority of the incident.

(2) *Airborne Collision Avoidance System Resolution Advisory*

A Pilot in Command shall notify the air traffic service unit concerned and submit an ACAS report to the Authority whenever a helicopter in flight has manoeuvred in response to an ACAS TRAFFIC Advisory.

(3) *Bird Hazards and Strikes*

(i) A Pilot in Command shall immediately inform the local air traffic service unit whenever a potential bird hazard is observed.

(ii) If he is aware that a bird strike has occurred, a Pilot in Command shall submit a written bird strike report after landing to the Authority whenever an helicopter for which he is responsible suffers a bird strike that results in significant damage to the helicopter or the loss or malfunction of any essential service. If the bird strike is discovered when the Pilot in Command is not available, the operator is responsible for submitting the report.

(3) *In-flight Emergencies with Dangerous Goods on Board*

If an in-flight emergency occurs and the situation permits, a Pilot in Command shall inform the appropriate air traffic service unit of any dangerous goods on board.

(4) *Unlawful Interference*

Following an act of unlawful interference on board a helicopter, the Pilot in Command or, in his absence, the operator shall submit a report as soon as practicable to the local Authority and to the Authority

(6) *Encountering Potential Hazardous Conditions* A Pilot in Command shall notify the appropriate air traffic services unit as soon as practicable whenever a potentially hazardous condition such as an irregularity in a ground or navigational facility, a meteorological phenomenon or a volcanic ash cloud is encountered during flight.

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Appendix 1 to CAR-OPS 4.225 Heliport Operating Minima

(a) *Take-off Minima*

(1) *General*

(i) Take-off minima established by the operator must be expressed as visibility or RVR limits, taking into account all relevant factors for each heliport planned to be used and the helicopter characteristics. Where there is a specific need to see and avoid obstacles on departure and/or for a forced landing, additional conditions (e.g. ceiling) must be specified.

(ii) 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.

(iii) When the reported meteorological visibility is below that required for take-off and RVR is not reported, a take-off may only be commenced if the Pilot in Command can determine that the RVR/visibility along the take-off FATO/runway is equal to or better than the required minimum.

(iv) 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/visibility along the take-off FATO/runway is equal to or better than the required minimum.

(2) *Visual reference.*

(i) 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 the critical power unit.

(ii) For night operations ground lighting must be available to illuminate the FATO/runway and any obstacles unless otherwise agreed by the Authority.

(3) *Required RVR/Visibility*

(i) For Performance Class I operations, an operator must establish an RVR and visibility respectively (RVR/VIS) as take-off minima in accordance with the following table:

Table 1 – RVR/Visibility for take-off

Take-off RVR/Visibility	
Onshore heliports with IFR departure procedures	**RVR/Visibility**
No lighting, no markings (Day only)	500 m
No markings (Night)	800 m
Runway edge FATO lighting and centreline marking	400 m
Offshore Helideck	**RVR/Visibility**
Single pilot operation Two pilot operation *The pilot must establish that the take-off flight path is free from obstacles*	500 m 400 m

(ii) For Performance Class 2 operations onshore, the Pilot in Command must operate to take-off minima of 800 m RVR/VIS and remain clear of cloud during the take-off maneuver until reaching Performance Class 1 capabilities.

(iii) For Performance Class 2 operations offshore, the Pilot in Command must operate to minima not less that that for Class 1 and remain clear of cloud during the take-off maneuver until reaching Performance Class 1 capabilities.

(b) *Non-Precision approach*

(1) *System minima*

(i) An operator must ensure that system minima for non-precision approach procedures, which are based upon the use of ILS without glide path (LLZ only), VOR, NDB, SRA and VDF are not lower than the MDH values given in Table 2 below.

Table 2 – System minima for non-precision approach aids

System minima	
Facility	**Lowest MDH**
ILS (no glide path – LLZ)	250 ft
SRA (terminating at ½ NM)	250 ft
SRA (terminating at 1 NM)	300 ft
SRA (terminating at 2 NM)	350 ft
VOR	300 ft
VOR/DME	250 ft
NDB	300 ft
VDF (QDM & QGH)	300 ft

(2) *Minimum Descent Height.* An operator must ensure that the minimum descent height for a non-precision approach is not lower than either:

(i) The OCH/OCL for the category of helicopter; or

(ii) The system minimum.

(3) *Visual Reference.* A pilot may not continue an approach below MDA/MDH unless at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:

(i) Elements of the approach light system;

(ii) The threshold;

(iii) The threshold markings;

(iv) The threshold lights;

(v) The threshold identification lights;

(vi) The visual glide slope indicator;

(vii) The touchdown zone or touchdown zone markings;

(viii) The touchdown zone lights;

(ix) FATO/Runway edge lights; or

(x) Other visual references accepted by the Authority.

(4) *Required RVR.* The lowest minima to be used by an operator for non-precision approaches are:

Table 3 – RVR for non-precision approach – full facilities

Onshore Non-precision approach minima Full facilities (1), (5), (6) and (7)				
MDH (ft)	**Facilities/RVR**			
	Full (1)	**Intermediate (2)**	**Basic (3)**	**Nil (4)**
250–299 ft	600 m	800 m	1000 m	1000 m
300–449 ft	800 m	1000 m	1000 m	1000 m
450– and above	1000 m	1000 m	1000 m	1000 m

Note 1: Full facilities comprise FATO/runway markings, 720 m or more of HI/MI approach lights, FATO/runway edge lights, threshold lights and FATO/runway end lights. Lights must be on.

Note 2: Intermediate facilities comprise runway markings, 420–719 m of HI/MI approach lights, FATO/runway edge lights, threshold lights and FATO/runway end lights. Lights must be on.

Note 3: Basic facilities comprise FATO/runway markings, <420 m of HI/MI approach lights, any length of LI approach lights, FATO/runway edge lights, threshold lights and FATO/runway end lights. Lights must be on.

Note 4: Nil approach light facilities comprise FATO/runway markings, runway edge lights, threshold lights, FATO/runway end lights or no lights at all.

Note 5: The tables are only applicable to conventional approaches with a nominal descent slope of not greater than 4°. Greater descent slopes will usually require that visual glide slope guidance (e.g. PAPI) is also visible at the Minimum Descent Height.

Note 6: The above figures are either reported RVR or meteorological visibility converted to RVR as in CAR-OPS 4.405.

Note 7: The MDH mentioned in Table 3 refers to the initial calculation of MDH. When selecting the associated RVR, there is no need to take account of a rounding up to the nearest ten feet, which may be done for operational purposes, e.g. conversion to MDA.

(ii) Where the missed approach point is within ½ 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.

(iii) *Night operations.* For night operations ground lighting must be available to illuminate the FATO/runway and any obstacles unless otherwise agreed by the Authority.

(c) *Precision approach – Category I operations*

(1) *General.* A Category I operation is a precision instrument approach and landing using ILS, MLS or PAR with a decision height not lower than 200 ft and with a runway visual range not less than 500 m.

(2) *Decision Height.* An operator must ensure that the decision height to be used for a Category I precision approach is not lower than:

(i) The minimum decision height specified in the Helicopter Flight Manual (HFM) if stated;

(ii) The minimum height to which the precision approach aid can be used without the required visual reference;

(iii) The OCH/OCL for the category of helicopter; or

(iv) 200 ft.

(3) *Visual Reference.* A pilot may not continue an approach below the Category I decision height, determined in accordance with sub-paragraph (c)(2) above, unless at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:

(i) Elements of the approach light system;

(ii) The threshold;

(iii) The threshold markings;

(iv) The threshold lights;

(v) The threshold identification lights;

(vi) The visual glide slope indicator;

(vii) The touchdown zone or touchdown zone markings;

(viii) The touchdown zone lights; or

(ix) FATO/Runway edge lights.

(4). *Required RVR*. For Category I operations by Performance Class 1 and 2 helicopters the following minima shall apply:

Table 4 – Onshore Precision Approach Minima for Cat I

Onshore Precision Approach Minima for Cat I				
Dh (ft)t	**Facilities/RVR**			
	Full (1)	**Intermediate (2)**	**Basic (3)**	**Nil (4)**
200 ft	500 m	600 m	700 m	1 000 m
201–250 ft	550 m	650 m	750 m	1 000 m
251–300 ft	600 m	700 m	800 m	1 000 m
301 ft and above	750 m	800 m	900 m	1 000 m

Note 1: Full facilities comprise FATO/runway markings, 720 m or more of HI/MI approach lights, FATO/runway edge lights, threshold lights and FATO/runway end lights. Lights must be on.

Note 2: Intermediate facilities comprise FATO/runway markings, 420–719 m of HI/MI approach lights, FATO/runway edge lights, threshold lights and FATO/runway end lights. Lights must be on.

Note 3: Basic facilities comprise FATO/runway markings, <420 m of HI/MI approach lights, any length of LI approach lights, FATO/runway edge lights, threshold lights and FATO/runway end lights. Lights must be on.

Note 4: Nil approach light facilities comprise runway markings, runway edge lights, threshold lights, runway end lights or no lights at all.

Note 5: The above figures are either the reported RVR or meteorological visibility converted to RVR in accordance with in CAR-OPS 4.405

Note 6: The Table is applicable to conventional approaches with a glide slope angle up to and including 4°.

Note 7: The DH mentioned in the Table 4 refers to the initial calculation of DH. When selecting the associated RVR, there is no need to take account of a rounding up to the nearest ten feet, which may be done for operational purposes, (e.g. conversion to DA).

(i) *Night operations*. For night operations ground lighting must be available to illuminate the FATO/runway and any obstacles unless otherwise agreed by the Authority.

(ii) *Single pilot operations*. For single pilot operations, an operator must calculate the minimum RVR for all approaches in accordance with this Appendix. An RVR of less than 800 m is not permitted except when using a suitable autopilot coupled to an ILS or MLS, in which case normal minima apply. The Decision Height applied must not be less than 1·25 x the minimum use height for the autopilot.

Appendix 1 to CAR-OPS 4.305 Refuelling/defuelling with passengers embarking, on board or disembarking

(a) An operator must establish operational procedures for re/defuelling with passengers embarking, on board or disembarking to ensure the following precautions are taken:

(1) One qualified person must remain at a specified location during fuelling operations with passengers on board. This qualified person must be capable of handling emergency procedures concerning fire protection and fire-fighting, handling communications and initiating and directing an evacuation;

(2) Crew, staff and passengers must be warned that re/defuelling will take place;

(3) 'Fasten Seat Belts' signs must be off;

(4) 'NO SMOKING' signs (if installed) must be on, together with interior lighting to enable emergency exits to be identified;

(5) Passengers must be instructed to unfasten their seat belts and refrain from smoking;

(6) Sufficient qualified personnel must be on board and be prepared for an immediate emergency evacuation;

(7) If the presence of fuel vapour is detected inside the helicopter, or any other hazard arises during re/defuelling, fuelling must be stopped immediately;

(8) The ground area beneath the exits intended for emergency evacuation and slide deployment areas must be kept clear; and

(9) Provision is made for a safe and rapid evacuation.

(b) When re/defuelling with passengers on board, ground servicing activities and work inside the helicopter, such as catering and cleaning, should be conducted in such a manner that they do not create a hazard and that the aisles and emergency doors are unobstructed.

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SUBPART E – ALL WEATHER OPERATIONS

For Low Visibility Take-off, Category II and Category III operations the requirements of CAR-OPS 0.355, CAR-OPS 0.360and CAR-OPS 0.365 are applicable.

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SUBPART F – PERFORMANCE GENERAL

CAR-OPS 4.470 Applicability

(a) An operator shall ensure that helicopters with a maximum approved passenger seating configuration of more than 19 or helicopters operating to/from heliports located in a congested hostile environment, are operated in accordance with CAR-OPS 3 Subpart G (Performance Class (1).

(b) Unless otherwise prescribed by subparagraph (a) above, an operator shall ensure that helicopters with a maximum approved passenger seating configuration of 19 or less but more than 9 are operated in accordance with Subpart G or H (Performance Class (1 or 2).

(c) Unless otherwise prescribed by subparagraph (a) above, an operator shall ensure that helicopters with a maximum approved passenger seating configuration of 9 or less are operated in accordance with CAR-OPS 3 Subpart G, H or I (Performance Class (1, 2 or 3).

CAR-OPS 4.475 General

(a) An operator shall ensure that the mass of the helicopter:

(1) At the start of the take-off; or, in the event of in-flight re-planning

(2) At the point from which the revised operational flight plan applies, is not greater than the mass at which the requirements of the appropriate Subpart can be complied with for the flight to be undertaken, allowing for expected reductions in mass as the flight proceeds, and for such fuel jettisoning as is provided for in the particular requirement.

(b) An operator shall ensure that the approved performance data contained in the Helicopter Flight Manual is used to determine compliance with the requirements of the appropriate Subpart, supplemented as necessary with other data acceptable to the Authority as prescribed in the relevant Subpart. When applying the factors prescribed in the appropriate Subpart, account may be taken of any operational factors already incorporated in the Helicopter Flight Manual performance data to avoid double application of factors.

(c) When showing compliance with the requirements of the appropriate Subpart, due account shall be taken of helicopter configuration, environmental conditions and the operation of systems which have an adverse effect on performance.

(d) An operator shall take account of charting accuracy when assessing compliance with the takeoff requirements of the applicable subpart.

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SUBPART G – PERFORMANCE CLASS 1

The requirements of CAR-OPS 3 Subpart G are applicable.

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SUBPART H – PERFORMANCE CLASS 2

The requirements of CAR-OPS 3 Subpart H are applicable.

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SUBPART I – PERFORMANCE CLASS 3

The requirements of CAR-OPS 3 Subpart I are applicable.

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SUBPART J – MASS and BALANCE

CAR-OPS 4.605 General

a) An operator shall ensure that during any phase of operation, the loading, mass and centre of gravity of the helicopter complies with the limitations specified in the approved Helicopter Flight Manual, or the Operations Manual if more restrictive.

(b) An operator must establish the mass and the centre of gravity of any helicopter by actual weighing prior to initial entry into service and thereafter at intervals of 4 years if individual helicopter masses are used and 9 years if fleet masses are used. The accumulated effects of modifications and repairs on the mass and balance must be accounted for and properly documented. Furthermore, helicopters must be reweighed if the effect of modifications on the mass and balance is not accurately known.

(c) An operator must determine the mass of all operating items and crew members included in the helicopter dry operating mass by weighing or by using standard masses. The influence of their position on the helicopter centre of gravity must be determined.

(d) An operator must establish the mass of the traffic load, including any ballast, by actual weighing or determine the mass of the traffic load in accordance with standard passenger and baggage masses as specified in CAR-OPS 4.620

(e) An operator must determine the mass of the fuel load by using the actual density or, if not known, the density calculated in accordance with a method specified in the Operations Manual.

CAR-OPS 4.607 Terminology

(a) *Dry Operating Mass*. The total mass of the helicopter ready for a specific type of operation excluding all usable fuel and traffic load.

(b) *Maximum Structural Take Off Mass*. The maximum permissible total helicopter mass at take-off.

(c) *Traffic Load*. The total mass of passengers, baggage and cargo, including any non-revenue load.

(d) *Passenger classification.*

(1) Adults, male and female, are defined as persons of an age of 12 years and above.

(2) Children are defined as persons of an age of two years and above but who are less than 12 years of age.

(3) Infants are defined as persons who are less than 2 years of age.**]**

CAR-OPS 4.610 Loading, mass and balance

An operator shall specify, in the Operations Manual, the principles and methods involved in the loading and in the mass and balance system that meet the requirements of CAR-OPS 4.605. This system must cover all types of intended operations.

CAR-OPS 4.615 Mass values for crew

(a) An operator shall use the following mass values to determine the dry operating mass:

(1) Actual masses including any crew baggage; or

(2) Standard masses, including hand baggage, of 85 kg for flight

(3) Other standard masses acceptable to the Authority.

(b) An operator must correct the dry operating mass to account for any additional baggage. The position of this additional baggage must be accounted for when establishing the centre of gravity of the helicopter.

CAR-OPS 4.620 Mass values for passengers and baggage

(a) An operator shall compute the mass of passengers and checked baggage using either the actual weighed mass of each person and the actual weighed mass of baggage or the standard mass values specified in Tables 1 and 2 below except where the number of passenger seats available is less than 6. In such cases passenger mass may be established by use of a verbal statement by or on behalf of each passenger and adding to it a predetermined constant to account for hand baggage and clothing.
The procedure specifying when to select actual or standard masses and the procedure to be followed when using verbal statements must be included in the Operations manual.

(b) If determining the actual mass by weighing, an operator must ensure that passengers' personal belongings and hand baggage are included. Such weighing must be conducted immediately prior to boarding and at an adjacent location.

(c) If determining the mass of passengers using standard mass values, the standard mass values in Tables 1 below must be used. The standard masses include hand baggage and the mass of any infant below 2 years of age carried by an adult on one passenger seat. Infants occupying separate passenger seats must be considered as children for the purpose of this sub-paragraph.

(d) Mass values for passengers – 20 passenger seats or more

Where the total number of passenger seats available on an helicopter is 20 or more, the standard masses of male and female in Table 1 are applicable. As an alternative, in cases where the total number of passenger seats available is 30 or more, the 'All Adult' mass values in Table 1 are applicable.

Table 1

Passenger seats:	**less than 20**		**20 and more**		**30 and more**
	Male	**Female**	**Male**	**Female**	**All adult**
All flights	86 kg	68 kg	82 kg	64 kg	78 kg
Children	35 kg	35 kg	35 kg	35 kg	35 kg
Hand baggage (where applicable)	6 kg	6 kg	6 kg	6 kg	6 kg
Survival suit (where applicable)	3 kg	3 kg	3 kg	3 kg	3 kg

(e) Mass values for baggage

Where the total number of passenger seats available on the helicopter is 20 or more the standard mass values given in Table 2 are applicable for each piece of checked baggage. For helicopters with 19 passenger seats or less, the actual mass of checked baggage, determined by weighing, must be used.

Table 2 – 20 or more passenger seats

Type of flight	**Baggage standard mass**
Domestic	11 kg
International	15 kg

(f) On any flight identified as carrying a significant number of passengers whose masses, including hand baggage, are expected to exceed the standard passenger mass, an operator must determine the actual mass of such passengers by weighing or by adding an adequate mass increment.

(g) If standard mass values for checked baggage are used and a significant number of passengers check in baggage that is expected to exceed the standard baggage mass, an operator must determine the actual mass of such baggage by weighing or by adding an adequate mass increment.

(h) An operator shall ensure that a Pilot in Command is advised when a non-standard method has been used for determining the mass of the load and that this method is stated in the mass and balance documentation.

CAR-OPS 4.625 Mass and balance documentation

(a) An operator shall establish mass and balance documentation prior to each flight specifying the load and its distribution. The mass and balance documentation must enable the Pilot in Command to determine that the load and its distribution is such that the mass and balance limits

of the helicopter are not exceeded. The person preparing the mass and balance documentation must be named on the document. The person supervising the loading of the helicopter must confirm by signature that the load and its distribution are in accordance with the mass and balance documentation. This document must be acceptable to the Pilot in Command, his acceptance being indicated by countersignature or equivalent

(b) An operator must specify procedures for Last Minute Changes to the load.

(c) Subject to the approval of the Authority, an operator may use an alternative to the procedures required by paragraphs (a) and (b) above.

SUBPART K – EQUIPMENT

The requirements CAR-OPS 3 Subpart K are applicable.

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SUBPART L – COMMUNICATION AND NAVIGATION EQUIPMENT

The requirements CAR-OPS 3 Subpart L are applicable

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SUBPART M – HELICOPTER MAINTENANCE

This Subpart has been entirely withdrawn due to the implementation of CAR M

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SUBPART N – FLIGHT CREW

(a) The requirements of CAR-OPS 3 Subpart N are applicable, as well as applicable paragraphs of Appendix 1 to CAR-OPS 4.005(c)

(c) Alleviation of CAR-OPS 3.965(b) (2):

"The period of validity of an operator proficiency check shall be 12 calendar months in addition to the remainder of the month of issue. If issued within the final 3 calendar months of validity of a previous operator proficiency check, the period of validity shall extend from the date of issue until 12 calendar months from the expiry date of that previous operator proficiency check."

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SUBPART O – CREW MEMBERS OTHER THAN FLIGHT CREW

The requirements of CAR-OPS 3 Subpart O are applicable.

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SUBPART P – MANUALS

The requirements of CAR-OPS 3 Subpart P are applicable.

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SUBPART Q – FLIGHT and DUTY TIME LIMITATIONS

CAR-OPS 4.1080 Flight Time Limitations

No operator shall assign a crew member for flight time, and no crew member shall accept such an assignment, if the crew member's total flight time in all flights conducted under this CAR will, as a result, exceed

(1) 900 hours in any 12 consecutive months;

(2) 110 hours in any one calender month.

(3) where the crew member conducts single-pilot IFR flights, 8 hours in any 24 consecutive hours.

CAR-OPS 4.1085 Flight Duty Time Limitations and Rest Periods

(a) Subject to CAR-OPS 4.1090 and CAR-OPS 4.1095, no operator shall assign a crew member for flight duty time, and no crew member shall accept such an assignment, if the crew member s flight duty time will, as a result, exceed

(1) 14 consecutive hours in any 24 consecutive hours; or

(2) 15 consecutive hours in any 24 consecutive hours, where

(i) the crew member's total flight time in the previous 30 consecutive days does not exceed 70 hours, or

(ii) the rest period prior to the flight is at least 24 hours.

(b) An operator shall ensure that, prior to any flight duty period, a crew member has completed a rest period at least as long as the preceding duty period or 11 hours, whichever is the greater plus any additional rest period required by this CAR.

(c) the crew member's rest shall not be interrupted by the operator during the rest period.

(d) A crew member shall use the rest periods referred to in subsection (b) to obtain the necessary rest and shall be adequately rested prior to reporting for flight duty.

CAR-OPS 4.1090 Split Flight Duty Time

(a) Where flight duty time includes a rest period, flight duty time may be extended beyond the maximum flight duty time referred to in CAR-OPS 4. 1085 (a) by one-half the length of the rest period, to a maximum of 4 hours, if

(1) the operator provides the crew member with advance notice of the extensionof flight duty time; and

(2) the operator provides the crew member with a rest period of at least 4 consecutive hours in suitable accommodation

(3) the crew member's rest is not interrupted by the operator during the rest period.

(b) The minimum rest period following flight duty time referred to in subsection (a) shall be increased by an amount at least equal to the extension to the flight duty time.

CAR-OPS 4.1095 Unforeseen Operational Circumstances

Flight duty time may be extended beyond the maximum flight duty times referred to in CAR-OPS 4. 1085 (a) and CAR-OPS 4. 1090 (a) with a maximum of 2 hours if:

(1) the pilot-in-command, after consultation with the other crew members, considers it safe to do so;

(2) the flight duty time is extended as a result of unforeseen operational circumstances.

CAR-OPS 4.1100 Delayed Reporting Time

Where a crew member is notified of a delay in reporting time within the two hours preceding that reporting time and the delay is in excess of three hours, the crew member's flight duty time starts three hours after the original reporting time.

CAR-OPS 4.1105 Requirements for Time Free from Duty

An operator shall provide each crew member with the following time free from all duty:

(1) at least one period of 36 consecutive hours within each 7 consecutive days; or

(2) at least one period of 3 consecutive calendar days within each 17 consecutive days.

CAR-OPS 4.1110 Crew Positioning

Where a crew member is required by an operator to travel for the purpose of positioning after the completion of flight duty time, the operator shall provide the crew member with an additional rest period at least equal to one-half the time spent travelling that is in excess of crew member's maximum flight duty time.

Note:
Terminology
For the purpose of this Subpart:

(a) *Duty* - Any task that a crewmember is required to carry out and which is associated with the business of an AOC holder.

(b) F*light duty period (FDP)* - A period which commences when an operating crewmember is required to report for a duty period that includes a flight and which finishes at the end of the block time on the final flight on which the crew member is an operating crew member.
(c) Unforeseen operational circumstances delays – Delays that are beyond the control of the operator such as those that would be caused by weather, aircraft equipment malfunction, and air traffic control delays. It would not include late arriving passengers, late food service, late fuel trucks, delays in loading baggage-freight-mail, or similar events.

(d) *Positioning* - The transferring of a crewmember from place to place, excluding "travelling" as defined below, at the behest of an operator.

(e) *Rest period* - An uninterrupted and defined period of time during which a crewmember is free of all duties and/or standby.

(f) *Split duty* - A flight duty period, which consists of two duties separated by a break.

(g) *Suitable accommodation* - A suitably furnished bedroom, with single occupancy if required by the crew member, which is subject to minimum noise, is well ventilated and should have the facility to control the levels of light and temperature.

(h)Travelling - All reasonable planned travelling time spent by a crew member in transit between his place of rest provided by the operator and the place of duty and vice versa.

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SUBPART R – TRANSPORT OF DANGEROUS GOODS BY AIR

The requirements of CAR-OPS 3 Subpart R are applicable.

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SUBPART S – SECURITY

The requirements of CAR-OPS 3 Subpart S are applicable.

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