DEPARTMENT OF CIVIL AVIATION

BELIZE
CIVIL AVIATION REGULATION

COMMERCIAL AIR TRANSPORTATION HELICOPTERS

BCAR – OPS - 3

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SUBPART A - APPLICABILITY

BCAR-OPS 3.001 - Applicability

(See Appendix 1 to BCAR-OPS 3.001)

(a) BCAR-OPS 3 prescribes requirements applicable to the operation of any civil helicopter for the purpose of commercial air transportation by any operator whose principal place of business is Belize. BCAR-OPS 3 does not apply to helicopters when used in military, customs and police services.

(b) The requirements in BCAR-OPS 3 are applicable as of the date of publication in the Government Gazette, unless otherwise indicated.

SUBPART B - GENERAL

BCAR-OPS 3.005 - General

(a) An operator shall not operate a helicopter for the purpose of commercial air transportation other than in accordance with BCAR-OPS 3.

(b) 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. (See Appendix 1 to BCAR-OPS 3.005(c).)

(c) Helicopter Emergency Medical Service (HEMS) operations shall be conducted in accordance with the requirements contained in BCAR-OPS 3 except for the variations contained in Appendix 1 to BCAR-OPS 3.005(d) for which a specific approval is required.

(d) Helicopter operations over a hostile environment located outside a congested area shall be conducted in accordance with the requirements contained in BCAR-OPS 3 except for the variations contained in Appendix 1 to BCAR-OPS 3.005(e) for which a specific approval is required. This Appendix does not apply to operations conducted in accordance with Appendix 1 to BCAR-OPS 3.005(d).

(e) Operations with helicopters with a maximum certificated take-off mass of 2730 kg or less: with a maximum approved seating configuration of 9 or less; by day and over routes navigated by reference to visual landmarks shall be conducted in accordance with the requirements contained in BCAR-OPS 3 except for the variations contained in Appendix 1 to BCAR-OPS 3.005(f) for which a specific approval is required.

(f) Operations which consist of one sector where the flight originates and terminates at the same heliport and which are operated by day, within a 20 nm radius of the point of departure, over routes navigated by reference to visual landmarks shall be conducted in accordance with the requirements contained in BCAR-OPS 3 except for the variations contained in Appendix 1 to BCAR-OPS 3.005(g) for which a specific approval is required.

BCAR-OPS 3.010 - Exemptions

The Department of Civil Aviation may exceptionally and temporarily grant an exemption from the provisions of BCAR-OPS 3 when satisfied that there is a need and subject to compliance with any supplementary condition the Department of Civil Aviation considers necessary in order to ensure an acceptable level of safety in the particular case.

BCAR-OPS 3.015 - Operational Directives

(a) The Department of Civil Aviation 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 BCAR-OPS 3.

BCAR-OPS 3.020 - 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.

BCAR-OPS 3.025 - Common Language

(a) An operator must ensure that all crewmembers can communicate in a common language or other means acceptable to the Department of Civil Aviation.

(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.

BCAR-OPS 3.030 - Minimum Equipment Lists - Operator's Responsibilities

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

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

BCAR-OPS 3.035 - 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 feedback system to the Accountable Manager (See also BCAR-OPS 3.175(h)) to ensure corrective action as necessary.

(b) The Quality System must include a Quality Assurance Program 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 Department of Civil Aviation.

(d) The Quality System must be described in relevant documentation.

(e) Notwithstanding sub-paragraph (a) above, the Department of Civil Aviation 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.

BCAR-OPS 3.037 - Accident prevention and flight safety program

(a) An operator shall establish an accident prevention and flight safety program, which may be integrated with the Quality System, including:

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

(2) Evaluation of relevant information relating to accidents and incidents and the promulgation of related information.

BCAR-OPS 3.040 - Additional crew members

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

BCAR-OPS 3.045
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BCAR-OPS 3.050 - Search and rescue information.

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

BCAR-OPS 3.055 - Information on emergency and survival equipment carried.

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

BCAR-OPS 3.060
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BCAR-OPS 3.065 - Carriage of weapons of war and munitions of war**.**

(a) An operator shall not transport weapons of war and munitions of war by air unless an approval to do so has been granted by a competent government authority and approved by the Department of Civil Aviation.

(b) An operator shall ensure that weapons of war and munitions of war are:

(1) Stowed in the helicopter in a place which is inaccessible to passengers during flight; and

(2) In the case of firearms, unloaded, unless, before the commencement of the flight, approval has been granted by all authorities concerned that such weapons of war and munitions of war may be carried in circumstances that differ in part or in total from those indicated in this sub-paragraph.

(c) An operator shall ensure that the commander is notified before a flight begins of the details and location on board the helicopter of any weapons of war and munitions of war intended to be carried.

BCAR-OPS 3.070 - Carriage of sporting weapons and ammunition

(a) An operator shall take all reasonable measures to ensure that any sporting weapons intended to be carried by air are reported to him.

(b) An operator accepting the carriage of sporting weapons shall ensure that:

(1) Helicopters with a maximum approved passenger seating capacity of more than 9, they are stowed in a place which is inaccessible to passengers during flight. Helicopters with a maximum approved passenger seating capacity of 9 or less, sporting weapons may be stowed in the passenger compartment, if no other compartment is available, with the permission of the commander; and

(2) In the case of firearms or other weapons that can contain ammunition, it shall be the responsibility of the commander to verify that they are unloaded.

(c) Ammunition for sporting weapons may be carried in passengers' checked baggage, subject to certain limitations, in accordance with the Technical Instructions (see BCAR-OPS 3.1160(b)(5)) as defined in BCAR-OPS 3.1150(a)(14).

BCAR-OPS 3.075 - Method of carriage of persons

(a) An operator shall take all reasonable measures to ensure that no person is in any part of a helicopter in flight which is not a part designed for the accommodation of persons unless temporary access has been granted by the commander to any part of the helicopter:

(1) For the purpose of taking action necessary for the safety of the helicopter or of any person, animal or goods therein; or

(2) In which cargo or stores are carried, being a part which is designed to enable a person to have access thereto while the helicopter is in flight.

BCAR-OPS 3.080 - Offering dangerous goods for transport by air

An operator shall take all reasonable measures to ensure that no person offers or accepts dangerous goods for transport by air unless the person has been trained and the goods are properly classified, documented, certificated, described, packaged, marked, labeled and in a fit condition for transport as required by the Technical Instructions.

BCAR-OPS 3.085 - Crew responsibilities

(a) A crewmember 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 incident that has endangered, or may have endangered, safety; or

(2) Make use of the operator's incident reporting schemes in accordance with BCAR-OPS 3.420. In all such cases, a copy of the report(s) shall be communicated to the commander concerned.

(c) A crewmember 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 a reasonable time period has elapsed after deep water diving, in accordance with the international tables of diving.

(3) Following blood donation except when a reasonable time period has elapsed, in accordance with the criteria of the attending doctor.

(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 continue his functions due to sickness or any other motive, to the extent that the flight may be endangered.

(d) A crew member shall not:

(1) Consume alcohol less than 8 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.

(e) The commander shall:

(1) Be responsible for the safe operation of the helicopter and safety of its occupants when the rotors are turning;

(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 a critical phase of flight 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 a helicopter with unserviceabilities allowed by the Configuration Deviation List (CDL) or Minimum Equipment List (MEL); and

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

(f) The commander 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.

BCAR-OPS 3.090 - Authority of the commander

All persons carried in the helicopter shall obey all lawful commands given by the commander for the purpose of securing the

safety of the helicopter and of persons or property carried therein.

BCAR-OPS 3.095

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BCAR-OPS 3.100 - Admission to cockpit

(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 cockpit unless that person is:

(1) An operating crew member;

(2) A representative of the Department of Civil Aviation 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 commander shall ensure that:

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

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

(c) The final decision regarding the admission of any person to the cockpit shall be the responsibility of the commander.

BCAR-OPS 3.105 - Unauthorized carriage

(a) An operator shall take all reasonable measures to ensure that no person secretes himself or secretes cargo on board a helicopter

BCAR-OPS 3.110 - Portable electronic devices

An operator shall not permit any person to use, and take all reasonable measures to ensure that no person does use, on board a helicopter a portable electronic device that can adversely affect the performance of the helicopter's systems and equipment.

BCAR-OPS 3.115 - Alcohol and drugs

An operator shall not permit any person to enter or be in, and take all reasonable measures to ensure that no person enters or is in, a helicopter when under the influence of alcohol or drugs to the extent that the safety of the helicopter or its occupants is likely to be endangered.

BCAR-OPS 3.120 - 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 persons therein

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

BCAR-OPS 3.125 - Documents to be carried on board a helicopter.

(a) An operator shall ensure that the following documents or copies thereof are carried on each flight:

(1) Certificate of Registration;

(2) Certificate of Airworthiness;

(3) Noise Certificate (if applicable);

(4) Air Operator Certificate;

(5) Aircraft Radio License; and

(6) Third party liability Insurance

Certificate(s).

(b) Each flight crewmember shall, on each flight when practicable, carry a valid flight crew license with appropriate rating(s) for the purpose of the flight.

BCAR-OPS 3.130 - Manuals to be carried on board.

(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 of the same model that is being operated is carried in the helicopter unless the Department of Civil Aviation has accepted that the Operations Manual prescribed in BCAR-OPS 3.1045, Appendix 1, Part B, contains relevant information for that helicopter.

BCAR-OPS 3.135 - Additional information and forms to be carried on board

(a) An operator shall ensure that, in addition to the documents and manuals prescribed in BCAR-OPS 3.125 and BCAR-OPS 3.130, the following information and forms, relevant to the type and area of operation, are carried on each flight:

(1) Operational Flight Plan containing at least the information required in BCAR-OPS 3.1060;

(2) Helicopter Technical Log containing at least the information required in BCAR-OPS 3.915(a);
(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 BCAR-OPS 3 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 commander as prescribed in BCAR-OPS 3.1215(d);

(9) Current maps and charts and associated documents as prescribed in BCAR-OPS 3.290(b)(7);

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

(11) Forms to comply with the reporting requirements of the Department of Civil Aviation and the operator.

(b) The Department of Civil Aviation 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.

BCAR-OPS 3.140 - 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 BCAR-OPS 3.1065; or, if this is impracticable,

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

(b) The information referred to in sub-paragraph (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 (BCAR-OPS 3.625 refers); and

(5) Special loads notification.

BCAR-OPS 3.145 - Power to inspect.

An operator shall ensure that any person authorized by the Department of Civil Aviation is permitted at any time to board and fly in any helicopter operated in accordance with an AOC issued by that Department and to enter and remain in the cockpit provided that the commander may refuse access to the cockpit if, in his opinion, the safety of the helicopter would thereby be endangered.

BCAR-OPS 3.150 - Production of documentation and records

(a) An operator shall:

(1) Give any person authorized by the Department of Civil Aviation 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 Department of Civil Aviation, within a reasonable period of time.

(b) The commander shall, within a reasonable time of being requested to do so by a person authorized by an Department of Civil Aviation, produce to that person the documentation required to be carried on board.

BCAR-OPS 3.155 - 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.

BCAR-OPS 3.160 - 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 Department of Civil Aviation.

(2) Unless prior permission has been granted by the Department of Civil Aviation, 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 Department of Civil Aviation.

(3) Additionally, when the Department of Civil Aviation 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.

(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 BCAR-OPS 3.715 and 3.720 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 Department of Civil Aviation, 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 crewmembers 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.

BCAR-OPS 3.165 - Leasing

(a) Terminology

Terms used in this sub-paragraph have the following meaning:

(1) Dry lease - Is when the helicopter is operated under the AOC of the lessee.

(2) Wet lease - Is when the helicopter is operated under the AOC of the lessor.

(3) ICAO operator - An operator certificated under BCAR-OPS 3, or equivalent, by one of the ICAO Member States.

(b) Leasing of helicopters between ICAO operators

(1) Wet lease-out – The holder of an AOC providing a helicopter and complete crew to another ICAO operator, and retaining all the functions and responsibilities prescribed in Subpart C, shall remain the operator of the helicopter.

(2) All leases except wet lease-out

(i) Except as provided by sub-paragraph (b)(1) above, the holder of an AOC utilizing a helicopter from, or providing it to, another ICAO operator, must obtain prior approval for the operation from his respective Department of Civil Aviation. Any conditions, which are part of this approval, must be included in the lease agreement.

(ii) Those elements of lease agreements which are approved by the Department of Civil Aviation, other than lease agreements in which a helicopter and complete crew are involved and no transfer of functions and responsibilities is intended, are all to be

regarded, with respect to the leased helicopter, as variations of the AOC under which the flights will be operated.

(c) Leasing of helicopters between an operator and any entity other than a ICAO operator

(1) Dry lease-in

(i) an operator shall not dry lease-in a helicopter from an entity other than a ICAO operator, unless approved by the Department of Civil Aviation. Any conditions, which are part of this approval, must be included in the lease agreement.

(ii) An operator shall ensure that, with regard to helicopters that are dry leased-in, any differences from the requirements prescribed in Subparts K or L, are notified to and are acceptable to the Department of Civil Aviation.

(2) Wet lease-in

(i) an operator shall not wet lease-in a helicopter for more than 3 consecutive months in any 12 consecutive months from an entity other than an ICAO operator without the approval of the Department of Civil Aviation.

(ii) An operator shall ensure that, with regard to helicopters that are wet leased-in:

(A) The safety standards of the lessor with respect to maintenance and operation are equivalent to BCARs;

(B) The lessor is an operator holding an AOC issued by a State which is a signatory to the Chicago Convention:

(C) The helicopter has a standard Certificate of Airworthiness issued in accordance with ICAO Annex 8. Standard Certificates of Airworthiness issued by an ICAO member state other than the State responsible for issuing the AOC, will be accepted when issued in accordance with BCAR-21; and

(D) Any ICAO requirement made applicable by the lessee's Department of Civil Aviation is complied with.

(3) Dry lease-out

(i) The holder of an AOC may dry lease-out a helicopter for the purpose of commercial air transportation to any operator of a State which is signatory to the Chicago Convention provided that the following conditions are met:

(A) The Department of Civil Aviation has exempted the ICAO operator from the relevant provisions of BCAR-OPS 3 and, after the foreign regulatory authority has accepted responsibility in writing for surveillance of the maintenance and operation of the helicopter(s), has removed the helicopter from its AOC; and

(B) The helicopter is maintained according to an approved maintenance program.

(4) Wet lease-out.

The holder of an AOC providing a helicopter and complete crew to another entity and retaining all the functions and responsibilities prescribed in Subpart C, shall remain the operator of the helicopter.
(d) Leasing of helicopters at short notice.
In circumstances where the holder of an AOC is faced with an immediate, urgent and unforeseen need for a replacement helicopter, the approval required by sub-paragraph (c)(2)(i) above may be deemed to have been given provided that:

(1) The lessor is an operator holding an AOC issued by a State which is a signatory to the Chicago Convention; and

(2) The lease-in period does not exceed 14 consecutive days; and

(3) The Department of Civil Aviation is

immediately notified of the use of this provision.

BCAR-OPS 3.170
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Appendix 1 to BCAR-OPS 3.005(c) - Helicopter Flight Manual limitations

(a) For helicopters certificated in Category A, a momentary flight through the height velocity (HV) envelope is allowed during the take-off and landing phases from/to a helideck or elevated heliport, when the helicopter is operated according to any of the following requirements:

(1) BCAR-OPS 3.517; or

(2) Sub-paragraph (c)(2)(i) of Appendix 1 to BCAR-OPS 3.005(d); or

(3) Appendix 1 to BCAR-OPS 3.005(e).]

Appendix 1 to BCAR-OPS 3.005(d) - Helicopter Emergency Medical Service

This Appendix does not apply to helicopter air ambulance or search and rescue operations.

Note: The Department of Civil Aviation is empowered to decide which operation is a HEMS operation in the sense of this Appendix and which is Helicopter Search and Rescue or Helicopter Air Ambulance. A Helicopter Air Ambulance operation is considered to be a normal Commercial Air Transport operation and therefore the contents of this Appendix do not apply to such activity. Helicopter Search and Rescue Operations, being classified as Aerial Work, are not governed by BCAR-OPS 3.

(a) Terminology

(1) *D*. The largest dimension of the helicopter when the rotors are turning.

(2) Ground emergency service personnel. Any ground emergency service personnel (such as policemen, firemen, etc.) involved with HEMS and whose tasks are to any extent pertinent to helicopter operations.

(3) Helicopter air ambulance flight. A flight, usually planned in advance, the purpose of which is to facilitate medical assistance, where immediate and rapid transportation is not essential, by carrying:
(i) Medical personnel; or

(ii) Medical supplies (equipment, blood, organs, drugs); or

(iii) Injured persons and other persons directly involved.

(4) HEMS crew member. A person who is assigned to a HEMS flight for the purpose of attending to any person in need of medical assistance carried in the helicopter and assisting the pilot during the mission. This person is subject to specific training as detailed in sub-paragraph (e)(2) below.

(5) Helicopter Emergency Medical Service (HEMS) flight. A flight by a helicopter operating under a HEMS approval, the purpose of which is to facilitate emergency medical assistance, where immediate and rapid transportation is essential, by carrying:

(i) Medical personnel; or

(ii) Medical supplies (equipment, blood, organs, drugs); or
(iii) Injured persons and other persons directly involved.

(6) HEMS operating base. A heliport at which the HEMS crewmembers and the HEMS helicopter may be on stand-by for HEMS operations.

(7) HEMS operating site. A site selected by the commander during a HEMS flight for landing and take off.

(8) Helicopter search and rescue flight. A

flight the purpose of which is to give immediate assistance to persons threatened by grave and imminent danger, or hostile environment.

(9) Medical passenger. A medical person carried in a helicopter during a HEMS flight, including but not limited to doctors, nurses and paramedics. This passenger shall receive a briefing as detailed in sub-paragraph (e)(3) below.

(b) Operations Manual.

An operator must ensure that the Operations Manual includes a supplement specifying operational considerations specific to HEMS operations. Relevant extracts from the Operations Manual shall be made available to the organization for which the HEMS is being provided.

(c) Operating requirements

(1) the helicopter.

Performance Class 3 operations shall not be conducted over a hostile environment.

(2) Performance requirements

(i) Take-off and landing - helicopters with a MTOW of 5700 kg or less

(A) Helicopters conducting operations to/from a heliport at a hospital which is located in a hostile environment, shall be operated in accordance with Subpart G (Performance Class 1) except that helicopters first issued with an individual C of A before 1 January 2000 are exempt from:

(A1) The requirements of BCAR-OPS 3.490(a)(3)(i);

(A2) The requirement of clearing the elevated heliport prescribed in BCAR-OPS 3.490(a)(3)(ii);

(A3) The requirement of clearing the elevated heliport prescribed in BCAR-OPS 3.510(a)(3)(i); and

(A4) The requirements of BCAR-OPS 3.510(a)(3)(ii)
provided the operator has been granted a relevant approval by the Department of Civil Aviation. (See Appendix 1 to BCAR-OPS 3.517(a), sub-paragraphs (a)(2)(ii) and (v), (b)(2) and (b)(5).]

(B) Helicopters conducting operations to/from a HEMS operating site located in a hostile environment shall as far as possible be operated in accordance with Subpart G (Performance Class 1). The commander shall make every reasonable effort to minimize the period during which there would be danger to helicopter occupants and persons on the surface in the event of failure of a power unit.

(C) The HEMS operating site must be big enough to provide adequate clearance of all obstructions, having minimum dimensions equal normally to at least 2D. For night operations, the site must be illuminated (from the ground or from the helicopter) to enable the site and any obstructions to be identified, and for unsurveyed site have dimensions equal normally to at least 2D x 4D.
(D) Guidance on take-off and landing procedures at previously unsurveyed HEMS operating sites shall be contained in the Operations Manual.

(ii) Take-off and landing - helicopters with a MTOW exceeding 5700 kg. Helicopters conducting HEMS shall be operated in accordance with Performance Class 1.

(3) The crew.

Notwithstanding the requirements prescribed in Subpart N, the following apply to HEMS operations:

(i) Selection. The Operations Manual shall

contain specific criteria for the selection of flight crewmembers for the HEMS task, taking previous experience into account.

(ii) Experience. The minimum experience level for commanders conducting HEMS flights shall be:

(A) Not less than:

(A1) 1,000 hours pilot in command of aircraft or 100 hours pilot-in-command of helicopters and 1000 hours as co-pilot in HEMS operations of which 500 hours is as pilot-in-command under supervision; and

(A2) 500 hours relevant operating experience in helicopters; and

(A3) 50 hours night flying in helicopters including 20 hours pilot-in-command, for those pilots engaged in night HEMS operations.

(B) Successful completion of training in accordance with sub-paragraph (e) of this Appendix.

(iii) Recency. All pilots conducting HEMS operations shall have completed a minimum of 30 minutes flight by sole reference to instruments in a helicopter or an approved flight simulator within the last 6 months. Every second recency flight may be carried out on an approved synthetic training device.

(iv) Crew composition

(A) Day flight. The minimum crew by day shall be one pilot and one HEMS crewmember. This can be reduced to one pilot only in exceptional circumstances.

(B) Night flight. The minimum crew by night shall be two pilots. However, one pilot and one HEMS crew member may be employed in specific geographical areas defined by the operator in the Operations Manual to the satisfaction of the Department of Civil Aviation taking into account the following:

(B1) Adequate ground reference;

(B2) Flight following system for the duration of the HEMS mission;

(B3) Reliability of weather reporting facilities;

(B4) HEMS minimum equipment list;

(B5) Continuity of a crew concept;

(B6) Minimum crew qualification, initial and recurrent training;

(B7) Operating procedures, including crew co-ordination;

(B8) Weather minima;

(B9) Additional considerations due to specific local conditions.

(4) HEMS operating minima.

(i) Performance Class 1 and 2 operations. The weather minima for the dispatch and en-route phase of a HEMS flight are shown in the following Table. In the event that during the en-route phase the weather conditions fall below the cloud base or visibility minima shown, VMC only capable helicopters must abandon the flight or return to base. Helicopters equipped and certificated for IMC Operations may abandon the flight, return to base or convert in all respects to a flight conducted under IFR, provided the flight crew are suitably qualified.

Table 1 - HEMS operating minima

2 pilots		1 pilot	
DAY			
Cloud base	Visibility	Cloud base	Visibility
500 feet and above	(See BCAR-OPS 3.465)	500 feet and above	(See BCAR-OPS 3.465)
499-400 feet	1000 m (Note 1)	499-400 feet	2000 m
NIGHT			
1500 feet (Note 2)	2500 m	1500 feet	3000 m

Note 1: Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is maneuvered at a speed that will give adequate opportunity to observe any obstacles in time to avoid a collision.

Note 2: Cloud base may be reduced to 1000 ft for short periods.

(ii) Performance Class 3 operations. The weather minima for the dispatch and en-route phase of a HEMS flight shall be a cloud ceiling of 600 ft and a visibility of 1500 m. Visibility may be reduced to 800 m for short periods when in sight of land if the helicopter is maneuvered at a speed that will give adequate opportunity to observe any obstacle and avoid a collision.

(d) Additional requirements

(1) Helicopter medical equipment

(i) The installation of all helicopter dedicated medical equipment and, where appropriate; its operation including any subsequent modifications shall be approved.

(ii) An operator shall ensure that procedures are established for the use of portable equipment on board.

(2) Helicopter communication and navigation equipment. Helicopters conducting HEMS flights shall be provided with communications equipment, in addition to that required by BCAR-OPS 3, Subpart L, capable of conducting two-way communication with the organization for which the HEMS is being provided and, where possible, to communicate with ground emergency service personnel. Any such additional equipment will require airworthiness approval.

(3) HEMS operating base facilities

(i) If crew members are required to be on standby with a reaction time of less than 45 minutes, dedicated suitable accommodation shall be provided close to each operating base.

(ii) At each operating base the pilots shall be provided with facilities for obtaining current and forecast weather information and shall be provided with satisfactory communications with the appropriate ATS unit. Satisfactory facilities shall be available for the planning of all tasks.

(4) Refuelling with passengers on board. When the commander considers refuelling with passengers on board to be necessary, it can be undertaken either rotors stopped or rotors turning provided the following requirements are met:

(i) Door(s) on the refuelling side of the helicopter shall remain closed;

(ii) Door(s) on the non-refuelling side of the helicopter shall remain open, weather permitting;

(iii) Fire fighting facilities of the appropriate scale shall be positioned so as to be immediately available in the event of a fire; and

(iv) Sufficient personnel shall be immediately available to move patients clear of the helicopter in the event of a fire.

(e) Training and checking

(1) Flight crew members

(i) BCAR-OPS 3 Subpart N training with the following additional items:

(A) Meteorological training concentrating on the understanding and interpretation of available weather information;

(B) Preparing the helicopter and specialist medical equipment for subsequent HEMS departure;

(C) Practice of HEMS departures;

(D) The assessment from the air of the suitability of HEMS operating sites; and

(E) The medical effects air transport may have on the patient.

(ii) BCAR-OPS 3 Subpart N checking with the following additional items:

(A) VMC proficiency day and/or night checks as appropriate including flying , landing and take-off profiles likely to be used at HEMS operating sites.

(B) Line checks with special emphasis on the following:

(B1) Local area meteorology;

(B2) HEMS flight planning;

(B3) HEMS departures;

(B4) The selection from the air of HEMS operating sites;

(B5) Low level flight in poor weather; and
(B6) Familiarity with established HEMS operating sites in operators local area register.

(2) HEMS crew member. The HEMS crew member shall be trained annually in the following subjects:

(i) Duties in the HEMS role;

(ii) Navigation (map reading, navigation aid principles and use);

(iii) Operation of radio equipment;

(iv) Use of onboard medical equipment;

(v) Preparing the helicopter and specialist medical equipment for subsequent HEMS departure;

(vi) Instrument reading, warnings, use of normal and emergency check lists in assistance of the pilot as required;

(vii) Basic understanding of the helicopter type in terms of location and design of normal and emergency systems and equipments;

(viii) Crew coordination;
(ix) Practice of response to HEMS call out;

(x) Conducting refuelling and rotors running refuelling;

(xi) HEMS operating site selection and use;

(xii) Techniques for handling patients, the medical consequences of air transport and some knowledge of hospital casualty reception;

(xiii) Marshalling signals;

(xiv) Under slung load operations as appropriate;

(xv) Winch operations as appropriate;

(xvi) The dangers to self and others of rotor running helicopters including loading of patients;

(xvii)The use of the helicopter inter-communications system.

(3) Medical passengers. Prior to any HEMS flight, or series of flights, medical passengers shall be briefed on the following:

(i) Familiarization with the helicopter type(s) operated;

(ii) Entry and exit under normal and emergency conditions both for self and patients;

(iii) Use of the relevant onboard specialist medical equipment;

(iv) The need for the commander's approval

prior to use of specialized equipment;

(v) Method of supervision of other medical staff;

(vi) The use of helicopter inter-communication systems; and

(vii) Location and use of onboard fire extinguishers.

(4) Ground emergency service personnel. An operator shall take all reasonable measures to ensure that ground emergency service personnel are familiar with the following:

(i) Two way radio communication procedures with helicopters;

(ii) The selection of suitable HEMS operating sites for HEMS flights;

(iii) The physical danger areas of helicopters;

(iv) Crowd control in respect of helicopter operations; and

(v) The evacuation of helicopter occupants following an on-site helicopter accident.

Appendix 1 to BCAR-OPS 3.005(e) - Helicopter operations over a hostile environment located outside a congested area

(a) Approval. An operator wishing to conduct operations in accordance with this Appendix must have the prior approval of the Department of Civil Aviation issuing the AOC and the Department of Civil Aviation of the State in which it is intended to conduct such operations. Such an approval will specify:

(1) The type of helicopter and

(2) The type of operation.

(b) Applicability. This Appendix shall only be applicable to turbine-powered helicopters operating over a hostile environment located outside a congested area where it has been substantiated that helicopter limitations, or other justifiable considerations, preclude the use of the appropriate performance criteria.
(c) Performance Class 2 alleviation. Helicopters operating in Performance Class 2 over a hostile environment located outside a congested area and with a maximum approved passenger seating configuration of 9 or less passengers are exempt from the following requirements of BCAR-OPS 3, Subpart H:

(1) BCAR-OPS 3.520(a)(2)(i)(A);

(2) BCAR-OPS 3.535(a)(2)(i)(B).

(d) Performance Class 3 alleviation. Helicopters operating in Performance Class 3 over a hostile environment located outside a congested area and with a maximum approved passenger seating configuration of 6 or less are exempt from the requirement of BCAR-OPS 3.240(a)(5) provided that the operator complies with Appendix 1 to BCAR-OPS 3.517(a), sub-paragraphs (a)(2)(ii) & (v).

(e) Operation. Specific procedures to be followed in the event of a power unit failure during take-off and landing must be established in the Operations Manual.

(f) Supplemental Oxygen for non-pressurized helicopters. Operations may be conducted with non-pressurized helicopters at pressure altitudes above 10,000 ft without the provision of supplemental oxygen equipment capable of storing and dispensing the oxygen supplies required, provided the cabin altitude does not exceed 10,000 ft for a period in excess of 30 minutes and never exceeds 13,000 ft pressure altitude.

Appendix 1 to BCAR-OPS 3.005(f) - Operations for small helicopters (VFR day only)

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

(1) The type of helicopter and

(2) The type of operation.

(b) Alleviation. The following rules are alleviated:

(1) BCAR-OPS 3.135 Additional information and forms to be carried: sub-paragraph (a)(1) not applicable for single pilot operations or sectors of less than 10 minutes or, as approved by the Department of Civil Aviation.

(2) BCAR-OPS 3.135 Additional information and forms to be carried: sub-paragraph (a)(6) not applicable when using the alternative of BCAR-OPS 3.625(c).

(3) BCAR-OPS 3.140 Information retained on the ground: sub-paragraph (b)(1) not applicable for single pilot operations or sectors of less than 10 minutes or, as approved by the Department of Civil Aviation.

(4) BCAR-OPS 3.225 Heliport Operating Minima: sub-paragraphs (b) and (c) not applicable.

(5) BCAR-OPS 3.255 Fuel policy: subparagraphs (b) to (d) not applicable when the fuel policy prescribed in BCAR-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 speed.

(6) BCAR-OPS 3.265 Carriage of inadmissible passengers, deportees or persons in custody: Not applicable when this class of passengers is not carried.

(7) BCAR-OPS 3.290 Flight preparation: sub-paragraph (a) not applicable for single pilot operations or sectors of less than 10 minutes or, as approved by the Department of Civil Aviation.
(8) BCAR-OPS 3.295 Selection of heliports: sub-paragraphs (b) to (d) not applicable.

(9) BCAR-OPS 3.375 In-flight fuel management: sub-paragraph (a) not applicable.

(10) BCAR-OPS 3.405 Commencement and continuation of approach: Not applicable.

(11) BCAR-OPS 3.410 Operating procedures - Threshold crossing height: Not applicable.

(12) Subpart E - All Weather Operations: Not applicable except for BCAR-OPS 3.465.

(13) Subpart K - Instruments and Equipment: Alternative equipment that meets the safety standard of the original equipment may be acceptable to the Department of Civil Aviation.

Appendix 1 to BCAR-OPS 3.005(g) - A to A operations (VFR day only)

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

(1) The type of helicopter and

(2) The type of operation.

(b) Alleviation. The following rules are alleviated:

(1) BCAR-OPS 3.125 Documents to be carried: Not required to be carried (but must

be available for inspection at the heliport).

(2) BCAR-OPS 3.130 Manuals to be carried: As appropriate.

(3) BCAR-OPS 3.135 Additional information and forms to be carried: As appropriate, but maps and charts required.

(4) BCAR-OPS 3.225 Heliport Operating Minima: sub-paragraphs (b) and (c) not applicable.

(5) BCAR-OPS 3.255 Fuel policy: sub-paragraphs (b) to (d) not applicable when the fuel policy prescribed in BCAR-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 speed.

(6) BCAR-OPS 3.290 Flight preparation: sub-paragraph (a) not applicable.

(7) BCAR-OPS 3.295 Selection of heliports: sub-paragraphs (b) to (d) not applicable.

(8) BCAR-OPS 3.375 In-flight fuel management: sub-paragraph (a) not applicable.

(9) BCAR-OPS 3.405 Commencement and continuation of approach: Not applicable.

(10) BCAR-OPS 3.410 Operating procedures - Threshold crossing height: Not applicable.
(11) Subpart E - All Weather Operations: Not applicable except for BCAR-OPS 3.465.

(12) Subpart K - Instruments and Equipment: Alternative equipment that meets the safety standard of the original equipment may be acceptable to the Department of Civil Aviation.

(c) Prohibition. The following activities are prohibited:

(1) BCAR-OPS 3.065 Carriage of weapons of war and munitions of war.

(2) BCAR-OPS 3.070 Carriage of sporting weapons and ammunition.
(3) BCAR-OPS 3.080 Offering dangerous goods for transport by air.

(4) BCAR-OPS 3.265 Carriage of Inadmissible passengers, deportees or persons in custody.

(5) BCAR-OPS 3.305 Re/defuelling with passengers embarking, on board or disembarking.

SUBPART - C CERTIFICATION AND SUPERVISION OF THE OPERATOR

BCAR-OPS 3.175 - General rules for Air Operator Certification

Note 1: Appendix 1 to this paragraph specifies the contents and conditions of the AOC.

Note 2: Appendix 2 to this paragraph specifies the management and organization requirements.

(a) An operator shall not operate a helicopter for the purpose of commercial air transportation otherwise than under, and in accordance with, the terms and conditions of an Air Operator Certificate (AOC).

(b) An applicant for an AOC, or variation of an AOC, shall allow the Department of Civil Aviation to examine all safety aspects of the proposed operation.

(c) An applicant for an AOC must:

(1) Not hold an AOC issued by another Department of Civil Aviation unless specifically approved by the Belize Department of Civil Aviation;

(2) Have his principal place of business and,

if any, his registered office located in Belize;

(3) Have registered the helicopters which are to be operated under the AOC in Belize; and

(4) Satisfy the Department of Civil Aviation that he is able to conduct safe operations.

(d) Notwithstanding sub-paragraph (c)(3) above, an operator may operate, with the mutual agreement of the Department of Civil Aviation issuing the AOC and another Department of Civil Aviation, helicopters registered on the national register of the second-named Department of Civil Aviation.

(e) An operator shall grant the Department of Civil Aviation access to his organization and helicopters and shall ensure that, with respect to maintenance, access is granted to any associated BCAR-145 maintenance organization, to determine continued compliance with BCAR-OPS.

(f) An AOC will be varied, suspended or revoked if the Department of Civil Aviation is no longer satisfied that the operator can maintain safe operations.

(g) The operator must have a management organization capable of exercising operational control and supervision over any flight operated under the terms of its AOC.

(h) The operator must have nominated an accountable manager acceptable to the Department of Civil Aviation who has corporate authority for ensuring that all operations and maintenance activities can be financed and carried out to the standard required by the Department of Civil Aviation.

(i) The operator must have nominated post holders, acceptable to the Department of Civil Aviation, who are responsible for,

(1) Flight operations;

(2) The maintenance system;

(3) Crew training; and

(4) Ground operations.

(j) The operator must ensure that every flight is conducted in accordance with the provisions of the Operations Manual.

(k) The operator must arrange appropriate ground handling facilities to ensure the safe handling of its flights.

(l) The operator must ensure that its helicopters are equipped and its crews are qualified, as required for the area and type of operation.

(m) The operator must comply with the maintenance requirements, in accordance with Subpart M, for all helicopters operated under the terms of its AOC.

(n) The operator must provide the Department of Civil Aviation with a copy of the Operations Manual, as specified in Subpart P and all amendments or revisions to it.

(o) The operator must maintain operational support facilities at the main operating base, appropriate for the area and type of operation.

BCAR-OPS 3.180 - Issue, variation and continued validity of an AOC.

(a) An operator will not be granted an AOC, or a variation to an AOC, and that AOC will not remain valid unless:

(1) Helicopters operated have a standard Certificate of Airworthiness issued in accordance with ICAO Annex 8 by an ICAO Member State. Standard Certificates of Airworthiness issued by an ICAO Member State other than Belize, will be accepted without further showing when issued in accordance with BCAR-21;
(2) The maintenance system has been

approved by the Department of Civil Aviation in accordance with Subpart M; and

(3) He has satisfied the Department of Civil Aviation that he has the ability to:

(i) Establish and maintain an adequate organization;

(ii) Establish and maintain a quality system in accordance with BCAR-OPS 3.035;

(iii) Comply with required training programs.

(iv) Comply with maintenance requirements, consistent with the nature and extent of the operations specified, including the relevant items prescribed in BCAR-OPS 3.175(g) to (o); and

(v) Comply with BCAR-OPS 3.175.

(b) Notwithstanding the provisions of BCAR-OPS 3.185(f), the operator must notify the Department of Civil Aviation as soon as practicable of any changes to the information submitted in accordance with subparagraph (a) above.

(c) If the Department of Civil Aviation is not satisfied that the requirements of sub-paragraph (a) above have been met, the Department of Civil Aviation may require the conduct of one or more demonstration flights, operated as if they were commercial air transport flights.

BCAR-OPS 3.185 - Administrative requirements

(a) An operator shall ensure that the following information is included in the initial application for an AOC and, when applicable, any variation or renewal applied for:

(1) The official name and business name, address and mailing address of the applicant;

(2) A description of the proposed operation;
BCAR-OPS 3.175 - General rules for Air Operator Certification

Note 1: Appendix 1 to this paragraph specifies the contents and conditions of the AOC.

Note 2: Appendix 2 to this paragraph specifies the management and organization requirements.

(a) An operator shall not operate a helicopter for the purpose of commercial air transportation otherwise than under, and in accordance with, the terms and conditions of an Air Operator Certificate (AOC).

(b) An applicant for an AOC, or variation of an AOC, shall allow the Department of Civil Aviation to examine all safety aspects of the proposed operation.

(c) An applicant for an AOC must:

(1) Not hold an AOC issued by another Department of Civil Aviation unless specifically approved by the Belize Department of Civil Aviation;

(2) Have his principal place of business and, if any, his registered office located in Belize;

(3) Have registered the helicopters which are to be operated under the AOC in Belize; and

(4) Satisfy the Department of Civil Aviation that he is able to conduct safe operations.

(d) Notwithstanding sub-paragraph (c)(3) above, an operator may operate, with the mutual agreement of the Department of Civil Aviation issuing the AOC and another Department of Civil Aviation, helicopters registered on the national register of the second-named Department of Civil Aviation.

(e) An operator shall grant the Department of Civil Aviation access to his organization

and helicopters and shall ensure that, with respect to maintenance, access is granted to any associated BCAR-145 maintenance organization, to determine continued compliance with BCAR-OPS.

(f) An AOC will be varied, suspended or revoked if the Department of Civil Aviation is no longer satisfied that the operator can maintain safe operations.

(g) The operator must have a management organization capable of exercising operational control and supervision over any flight operated under the terms of its AOC.

(h) The operator must have nominated an accountable manager acceptable to the Department of Civil Aviation who has corporate authority for ensuring that all operations and maintenance activities can be financed and carried out to the standard required by the Department of Civil Aviation.

(i) The operator must have nominated post holders, acceptable to the Department of Civil Aviation, who are responsible for,

(1) Flight operations;

(2) The maintenance system;

(3) Crew training; and

(4) Ground operations.

(j) The operator must ensure that every flight is conducted in accordance with the provisions of the Operations Manual.

(k) The operator must arrange appropriate ground handling facilities to ensure the safe handling of its flights.

(l) The operator must ensure that its helicopters are equipped and its crews are qualified, as required for the area and type of operation.

(m) The operator must comply with the maintenance requirements, in accordance with Subpart M, for all helicopters operated under the terms of its AOC.

(n) The operator must provide the Department of Civil Aviation with a copy of the Operations Manual, as specified in Subpart P and all amendments or revisions to it.

(o) The operator must maintain operational support facilities at the main operating base, appropriate for the area and type of operation.

BCAR-OPS 3.180 - Issue, variation and continued validity of an AOC.

(a) An operator will not be granted an AOC, or a variation to an AOC, and that AOC will not remain valid unless:

(1) Helicopters operated have a standard Certificate of Airworthiness issued in accordance with ICAO Annex 8 by an ICAO Member State. Standard Certificates of Airworthiness issued by an ICAO Member State other than Belize, will be accepted without further showing when issued in accordance with BCAR-21;
(2) The maintenance system has been approved by the Department of Civil Aviation in accordance with Subpart M; and

(3) He has satisfied the Department of Civil Aviation that he has the ability to:

(i) Establish and maintain an adequate organization;

(ii) Establish and maintain a quality system in accordance with BCAR-OPS 3.035;

(iii) Comply with required training programs.

(iv) Comply with maintenance requirements, consistent with the nature and extent of the operations specified, including the relevant items prescribed in BCAR-OPS 3.175(g) to (o); and

(v) Comply with BCAR-OPS 3.175.

(b) Notwithstanding the provisions of BCAR-OPS 3.185(f), the operator must notify the Department of Civil Aviation as soon as practicable of any changes to the information submitted in accordance with subparagraph (a) above.

(c) If the Department of Civil Aviation is not satisfied that the requirements of sub-paragraph (a) above have been met, the Department of Civil Aviation may require the conduct of one or more demonstration flights, operated as if they were commercial air transport flights.

BCAR-OPS 3.185 - Administrative requirements

(a) An operator shall ensure that the following information is included in the initial application for an AOC and, when applicable, any variation or renewal applied for:

(1) The official name and business name, address and mailing address of the applicant;

(2) A description of the proposed operation;
(3) A description of the management organization;

(4) The name of the accountable manager;

(5) The names of major post holders, including those responsible for flight operations, the maintenance system, crew training and ground operations together with their qualifications and experience; and

(6) The Operations Manual.

(b) In respect of the operator' s maintenance system only, the following information must be included in the initial application for an AOC and, when applicable, any variation or renewal applied for, and for each helicopter type to be operated:

(1) The maintenance management exposition;

(2) The operator's helicopter maintenance program(s);

(3) The helicopter technical log;

(4) Where appropriate, the technical specification(s) of the maintenance contract(s) between the operator and any BCAR-145 approved maintenance organization;

(5) The number of helicopters;

(c) The application for an initial issue of an AOC must be submitted at least 90 days before the date of intended operation. The Operations Manual may be submitted later but not less than 60 days before the date of intended operation.

(d) The application for the variation of an AOC must be submitted at least 30 days, or as otherwise agreed, before the date of intended operation.

(e) The application for the renewal of an AOC must be submitted at least 30 days, or as otherwise agreed, before the end of the existing period of validity.

(f) Only in exceptional circumstances, the Department of Civil Aviation shall be notified at least 10 days prior to any proposed change in the nomination of any administrative employee.

BCAR-OPS 3.190

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Appendix 1 to BCAR-OPS 3.175 - Contents and conditions of the Air Operator Certificate

An AOC specifies the:

(a) Name and location (main place of business) of the operator;

(b) Date of issue and period of validity;

(c) Description of the type of operations authorized;

(d) Type(s) of helicopter(s) authorized for use;

(e) Registration markings of the authorized helicopter(s) except that operators may obtain approval for a system to inform the Department of Civil Aviation about the registration markings for helicopters operated under its AOC;

(f) Authorized areas of operation;

(g) Special limitations (e.g. VFR only); and

(h) Special authorizations/approvals e.g.;

CAT II/CAT III (including approved minima), Sea Pilot transfers to Offshore operations, HEMS (See Appendix 1 to BCAR-OPS 3.005(d)),RNAV, Transportation of Dangerous Goods (See BCAR-OPS 3.1155), Helicopter operations over a hostile environment located outside a congested area (See Appendix 1 to BCAR-OPS 3.005(e)), Operations for small helicopters (VFR day only) (See Appendix 1 to BCAR-OPS 3.005(f)), A to A Operations (VFR day only) (See Appendix 1 to BCAR-OPS 3.005(g)), Helicopter operations with an exposure time to a power unit failure during take-off or landing. (See BCAR-OPS 3.517 and BCAR-OPS 3.540(a)(4).)

Appendix 2 to BCAR-OPS 3.175 - The management and organization of an AOC holder

(a) General

(1) An operator must have a sound and effective management structure in order to ensure the safe conduct of air operations. Nominated post holders must have proven competency and knowledge in civil aviation.

(2) In the context of this Appendix, 'competency and knowledge' means that an individual must have a technical qualification and managerial experience acceptable to the Department of Civil Aviation, for the safe conduct of the company's flight operations.

(b) Nominated post holders

(1) A description of the functions and the responsibilities of the nominated post holders, including their names, must be contained in the Operations Manual and the Department of Civil Aviation must be given notice in writing of any intended or actual change in appointments or functions.

(2) The operator must make arrangements to ensure continuity of supervision in the absence of nominated post holders.

(3) The operator must satisfy the Department of Civil Aviation that the management organization is suitable and properly matched to the operating network and scale of operation.

(4) A person nominated as a post holder by the holder of an AOC must not be nominated as a post holder by the holder of any other AOC, unless acceptable to the Department of Civil Aviation. Nominated post holders must be contracted to work sufficient hours such that the individual can fulfill the management functions associated with the size and scope of the operator' s business.

(5) More than one of the nominated posts may be filled by one person if acceptable to the Department of Civil Aviation.
NOTE: The requirements relating to the appointment of the nominated post holder responsible for the maintenance system in accordance with BCAR-OPS 3.175(i)(2) are prescribed in BCAR-OPS 3.895.

(c) Adequacy and supervision of staff

(1) Crewmembers. The operator must employ sufficient flight and cabin crew for the planned operation, trained and checked in accordance with Subpart N and Subpart O as appropriate.

(2) Ground Staff

(i) The number of ground staff is dependent upon the nature and the scale of operations. Operations and ground handling departments, in particular, must be staffed by trained personnel who have a thorough understanding of their responsibilities within the organization.

(ii) An operator contracting other organizations to provide certain services retains responsibility for the maintenance of proper standards. In such circumstances, a nominated post holder must be given the task of ensuring that any contractor employed meets the required standards.

(3) Supervision

(i) The number of supervisors to be appointed is dependent upon the structure of the operator and the number of staff employed. The duties and responsibilities of these supervisors must be defined, and any flying commitments arranged so that they can discharge their supervisory responsibilities.

(ii) The supervision of all crewmembers must be exercised by individuals possessing experience and personal qualities sufficient to ensure the attainment of the standards specified in the operations manual.

(d) Accommodation facilities

(1) An operator must ensure that working space available at each operating base is sufficient for personnel pertaining to the safety of flight operations. Consideration must be given to the needs of ground staff, those concerned with operational control, the storage and display of essential records, and flight planning by crews.

(2) Office services must be capable, without delay, of distributing operational instructions and other information to all concerned.

(e) Documentation. The operator must make arrangements for the production of manuals, amendments and other documentation.

SUBPART – D OPERATIONAL PROCEDURES

BCAR-OPS 3.195 - Operational Control and Supervision

An operator shall exercise operational control and establish and maintain a method of supervision of flight operations approved by the Department of Civil Aviation

BCAR-OPS 3.200 - Operations Manual

An operator shall provide an Operations Manual in accordance with BCAR-OPS 3, Subpart P for the use and guidance of operations personnel.

BCAR-OPS 3.205 - 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.

BCAR-OPS 3.210 - Establishment of Procedures
(a) An operator shall establish procedures and instructions, for each helicopter type, containing ground staff and crewmembers' 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 crewmember to perform any activities during critical phases of the flight other than those required for the safe operation of the helicopter.

(d) An operator shall not permit a helicopter rotor to be turned under power without a qualified pilot at the controls.

BCAR-OPS 3.215 - Use of Air Traffic Services

An operator shall ensure that Air Traffic Services are used for all flights whenever available.

BCAR-OPS 3.220 - Authorization of Heliports by the Operator

An operator shall only authorize use of heliports that are adequate for the type(s) of helicopter and operation(s) concerned.

BCAR-OPS 3.225 - Heliport Operating Minima

(a) An operator shall specify heliport-operating minima, established in accordance with BCAR-OPS 3.430 for each departure, destination or alternate heliport authorized to be used in accordance with BCAR-OPS 3.220.

(b) These minima must take into account any increment to the specified values imposed by the Department of Civil Aviation.

(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.

BCAR-OPS 3.230 - Departure and Approach Procedures

(a) An operator shall use departure and approach procedures that have been established.

(b) Notwithstanding sub-paragraph (a) above, a commander may accept an ATC clearance to deviate from a published departure or arrival route, provided obstacle clearance criteria are observed and full account is taken of the operating conditions. The final approach must be flown visually or in accordance with the established instrument approach procedure.

(c) Different procedures to those required to be used in accordance with sub-paragraph (a) above may only be implemented by an operator provided they have been approved by the State in which the heliport is located, if required, and accepted by the Department of Civil Aviation.

BCAR-OPS 3.235 - 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.

BCAR-OPS 3.240 - 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 (BCAR-OPS 3.135(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 is operated according to BCAR-OPS 3.540(a)(2)(i) or BCAR-OPS 3.540(a)(2)(ii).

(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 Department of Civil Aviation.

BCAR-OPS 3.243 - Operations in areas with specific navigation performance requirements.

(a) An operator shall not operate a helicopter in defined areas, or a defined portion of specified airspace, based on Regional Air Navigation Agreements where minimum navigation performance specifications are prescribed unless approved to do so by the Department of Civil Aviation (RNP/RNAV Approval). (See also BCAR-OPS 3.865(c)(2).)

BCAR-OPS 3.245

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BCAR-OPS 3.250 - Establishment of minimum flight altitudes

(a) An operator shall establish minimum flight altitudes and the methods to determine those altitudes for all route segments to be flown which provide the required terrain clearance taking into account the requirements of BCAR-OPS 3, Subparts F to I.

(b) The method for establishing minimum flight altitudes must be approved by the Department of Civil Aviation.

(c) Where minimum flight altitudes established by States over
flown are higher than those established by the operator, the higher values shall apply.

(d) An operator shall take into account the following factors when establishing minimum flight altitudes:

(1) The accuracy with which the position of the helicopter can be determined;

(2) The probable inaccuracies in the indications of the altimeters used;

(3) The characteristics of the terrain (e.g. sudden changes in the elevation) along the routes or in the areas where operations are to be conducted.

(4) The probability of encountering unfavorable meteorological conditions (e.g. severe turbulence and descending air currents); and

(5) Possible inaccuracies in aeronautical charts.

(e) In fulfilling the requirements prescribed in sub-paragraph (d) above due consideration shall be given to:

(1) Corrections for temperature and pressure variations from standard values;
(2) The ATC requirements; and

(3) Any contingencies along the planned route.

BCAR-OPS 3.255 - Fuel policy

(a) An operator must establish a fuel policy for the purpose of flight planning and in-flight replanning 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 only based upon:

(1) Procedures and data contained in or derived from the Operations Manual or current helicopter specific data; and

(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) Taxi 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 commander.

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

(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. isolated heliports); and

(3) Extra fuel if required by the commander.

BCAR-OPS 3.260 - Carriage of Persons with Reduced Mobility

(a) An operator shall establish procedures for the carriage of Persons with Reduced Mobility (PRMs).

(b) An operator shall ensure that PRMs are not allocated, nor occupy, seats where their presence could:

(1) Impede the crew in their duties;

(2) Obstruct access to emergency equipment; or

(3) Impede the emergency evacuation of the helicopter.

(c) The commander must be notified when PRMs are to be carried on board.

BCAR-OPS 3.265 - Carriage of inadmissible passengers, deportees or persons in custody

An operator shall establish procedures for the transportation of inadmissible passengers, deportees or persons in custody to ensure the safety of the helicopter and its occupants. The commander must be notified when the above-mentioned persons are to be carried on board.

BCAR-OPS 3.270 - Stowage of baggage and cargo

(See Appendix 1 to BCAR-OPS 3.270)

(a) An operator shall establish procedures to ensure that only such hand baggage and cargo is carried into a helicopter and taken into the passenger cabin as can be adequately and securely stowed.

(b) An operator shall establish procedures to ensure that all baggage and cargo on board, which might cause injury or damage, or obstruct aisles and exits if displaced, is stowed so as to prevent movement.

BCAR-OPS 3.275

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BCAR-OPS 3.280 - Passenger Seating

An operator shall establish procedures to ensure that passengers are seated where, in the event that an emergency evacuation is required, they may best assist and not hinder evacuation from the helicopter.

BCAR-OPS 3.285 - Passenger briefing

An operator shall ensure that:

(a) General.

(1) Passengers are verbally briefed about safety matters, parts or all of which may be given by an audio-visual presentation.

(2) Passengers are provided with a safety-briefing card on which picture type instructions indicate the operation of emergency equipment and exits likely to be used by passengers.

(b) Before take-off

(1) Passengers are briefed on the following items if applicable:

(i) Smoking regulations;

(ii) Back of the seat to be in the upright position and tray table (if available) stowed;

(iii) Location of emergency exits;

(iv) Location and use of floor proximity escape path markings;

(v) Stowage of hand baggage;

(vi) Restrictions on the use of portable electronic devices; and

(vii) The location and the contents of the safety briefing card,

and,

(2) Passengers receive a demonstration of the following:

(i) The use of safety belts and/or safety harnesses, including how to fasten and unfasten the safety belts and/or safety harnesses;

(ii) The location and use of oxygen equipment if required (BCAR-OPS 3.770 and BCAR-OPS 3.775 refer). Passengers must also be briefed to extinguish all smoking materials when oxygen is being used; and

(iii) The location and use of life jackets, life rafts and survival suits if required (BCAR-OPS 3.825, 3.827 and 3.830 refer).

(c) After take-off

(1) Passengers are reminded of the following if applicable:

(i) Smoking regulations; and

(ii) Use of safety belts and/or safety harnesses.

(d) Before landing

(1) Passengers are reminded of the following if applicable:

(i) Smoking regulations;

(ii) Use of safety belts and/or safety harnesses;

(iii) Back of the seat to be in the upright position and tray table (if available) stowed;

(iv) Re-stowage of hand baggage; and

(v) Restrictions on the use of portable electronic devices.

(e) After landing

(1) Passengers are reminded of the following:

(i) Smoking regulations; and

(ii) Use of safety belts and/or safety harnesses.

(f) In an emergency during flight, passengers are instructed in such emergency action as may be appropriate to the circumstances.

BCAR-OPS 3.290 - Flight preparation

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

(b) The commander shall not commence a flight unless he is satisfied that:

(1) The helicopter is airworthy;

(2) The helicopter configuration is in accordance with the Configuration Deviation List (CDL);

(3) The instruments and equipment required for the flight to be conducted, in accordance with BCAR-OPS 3, Subparts K and L, are 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 BCAR-OPS 3.125 and BCAR-OPS 3.135 are on board;

(7) Current maps, charts and associated documents 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 by BCAR-OPS 3.290 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 BCAR-OPS 3, 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.

BCAR-OPS 3.295 - Selection of heliports

(a) An operator shall establish procedures for the selection of destination and/or alternate heliports in accordance with BCAR-OPS 3.220 when planning a flight.

(b) The commander 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 commander shall specify at least one alternate in the operational flight plan unless:

(1) For a flight to a 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 Department of Civil Aviation; or

(2) 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:

(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 in order 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.

(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 Department of Civil Aviation.

BCAR-OPS 3.297

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BCAR-OPS 3.300 - Submission of ATS Flight Plan

An operator shall ensure that a flight is not commenced unless an ATS flight plan has been submitted, or adequate information has been deposited, or transmitted as soon as possible after take-off, in order to permit alerting services to be activated if required.

BCAR-OPS 3.305 – Refuelling / defuelling with passengers embarking, on board or disembarking.

(See Appendix 1 to BCAR-OPS 3.305)

An operator shall ensure that no helicopter is refuelled or 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.

BCAR-OPS 3.307 – Refueling /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.

BCAR-OPS 3.310 - Crew members at stations

(a) Flight crew members

(1) During taxi, take-off and landing each flight crew member required to be on duty in the cockpit shall be at his station.

(2) During all other phases of flight each flight crew member required to be on duty shall remain at his station unless his absence is necessary for the performance of his duties in connection with the operation, or for physiological needs, provided at least one suitably qualified pilot remains at the controls of the helicopter at all times.

(b) Cabin crew members. On all the decks of the helicopter that are occupied by passengers, required cabin crew members shall be seated at their assigned stations during taxi, take-off and landing, and whenever deemed necessary by the commander in the interest of safety.

BCAR-OPS 3.315

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BCAR-OPS 3.320 - Seats, safety belts and harnesses

(a) Crew members

(1) During taxi, take-off and landing, and whenever deemed necessary by the commander in the interest of safety, each crew member shall be properly secured by all safety belts and harnesses provided.

(2) During other phases of the flight each flight crew member in the cockpit shall keep his safety belt fastened while at his station.

(b) Passengers

(1) Before take-off and landing, and during taxing, and whenever deemed necessary in the interest of safety, the commander shall ensure that each passenger on board occupies a seat or berth with his safety belt, or harness where provided, properly secured.

(2) An operator shall make provision for, and the commander shall ensure that multiple occupancy of helicopter seats may only be allowed on specified seats and does not occur other than by one adult and one infant who is properly secured by a supplementary loop belt or other restraint device.

BCAR-OPS 3.325 - Securing of passenger cabin and galley(s)

(a) An operator shall establish procedures to ensure that before taxing, take-off and landing all exits and escape paths are unobstructed.

(b) The commander shall ensure that before take-off and landing, and whenever deemed

necessary in the interest of safety, all equipment and baggage is properly secured.

BCAR-OPS 3.330 - Accessibility of emergency equipment

The commander shall ensure that relevant emergency equipment remains easily accessible for immediate use.

BCAR-OPS 3.335 - Smoking on board

(a) The commander 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.

BCAR-OPS 3.340 - Meteorological Conditions

(a) On an IFR flight a commander shall not:

(1) Commence take-off; nor

(2) Continue beyond the point from which a revised flight plan applies in the event of in-flight replanning, unless information is available indicating that the expected weather conditions at the destination will be at or above the applicable landing minima specified in accordance with BCAR-OPS 3.225 and, if an alternate heliport is required in accordance with BCAR-OPS 3.295, the cloud ceiling and runway visual range at the alternate are 200 ft and 400 m respectively above the minima specified.

(b) On a VFR flight a commander shall not commence take-off unless current meteorological reports or a combination of current reports and forecasts indicate that the meteorological conditions along the route or that part of the route to be flown under VFR will, at the appropriate time, be such as to render compliance with these rules possible.

(c) On an IFR flight, a commander shall not continue towards the planned destination heliport unless the latest information available indicates that, at the expected time of arrival, the weather conditions at the destination, or at least one destination alternate heliport, are at or above the applicable operating minima.

[(d)] A flight to a helideck or elevated heliport shall not be operated when the mean wind speed at the helideck or elevated heliport is reported as 60 knots or more.

BCAR-OPS 3.345 - Ice and other contaminants

(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 commander 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.

(c) A commander shall not commence a flight under known or expected icing conditions unless the helicopter is certificated and equipped to cope with such conditions.

BCAR-OPS 3.350 - Fuel and oil supply

A commander 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.

BCAR-OPS 3.355 - Take-off conditions

Before commencing take-off, a commander 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 departure.

BCAR-OPS 3.360 - Application of take-off minima

Before commencing take-off, a commander 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.

BCAR-OPS 3.365 - Minimum flight altitudes

The commander 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.

BCAR-OPS 3.370 - 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 commercial air transportation flights.

BCAR-OPS 3.375 - In-flight fuel management

(See Appendix 1 to BCAR-OPS 3.375)

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

(b) A commander 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 commander shall declare an emergency when the actual usable fuel on board is less than final reserve fuel.

BCAR-OPS 3.380

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BCAR-OPS 3.385 - Use of supplemental oxygen

A commander shall ensure that flight crew members engaged in performing duties essential to the safe operation of a helicopter in flight use supplemental oxygen continuously whenever cabin altitude exceeds 10 000 ft for a period in excess of 30 minutes and whenever the cabin altitude exceeds 13000 ft.

BCAR-OPS 3.390

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BCAR-OPS 3.395 - Ground proximity detection

When undue proximity to the ground is detected by any flight crew member or by a ground proximity warning system, the commander 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.

BCAR-OPS 3.400 - Approach and landing conditions

Before commencing an approach to land,

the commander 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 approach, landing or missed approach, having regard to the performance information contained in the Operations Manual.

BCAR-OPS 3.405 - Commencement and continuation of approach

(a) The commander 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.

[(b) Where RVR is not available, RVR values may be derived by converting the reported visibility in accordance with Appendix 1 to BCAR-OPS 3.430, sub-paragraph (h).

(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 continue to DA/H or MDA/H.

(d) Where no outer marker or equivalent position exists, the commander 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.

(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.

BCAR-OPS 3.410 - Operating procedures - Threshold crossing height

An operator must establish operational procedures designed to ensure that a helicopter being used to conduct precision approaches crosses the threshold by a safe margin, with the helicopter in the landing configuration and attitude.

BCAR-OPS 3.415 - Journey log

A commander shall ensure that the Journey log is completed.

BCAR-OPS 3.420 - Occurrence reporting

(a) Flight Incidents

(1) The operator or commander of a helicopter shall submit a report to the Department of Civil Aviation of any incident that has endangered or may have endangered safe operation of a flight.

(2) Reports shall be dispatched within 72 hours of the event, unless exceptional circumstances prevent this.

(b) Technical defects and exceedance of technical limitations. A commander shall ensure that all technical defects and exceedances of technical limitations occurring while he was responsible for the flight are recorded in the helicopter's Technical Log.

(c) Air Traffic Incidents. A commander shall submit an air traffic incident report in accordance with ICAO PANS RAC whenever a helicopter in flight has been endangered by:

(1) A near collision with any other flying device; or

(2) Faulty air traffic procedures or lack of compliance with applicable procedures by Air Traffic Services or by the flight crew; or

(3) A failure of ATS facilities.

(d) Bird Hazards and Strikes

(1) A commander shall immediately inform the appropriate ground station whenever a potential bird hazard is observed.

(2) A commander shall submit a written bird strike report to the Department of Civil Aviation after landing whenever a helicopter for which he is responsible suffers a bird strike.

(e) In-flight emergencies with Dangerous Goods on board. If an in-flight emergency occurs and the situation permits, a commander shall inform the appropriate Air Traffic Services unit of any Dangerous Goods on board.

(f) Unlawful interference. Following an act of unlawful interference on board a helicopter, a commander shall submit a report, as soon as practicable, to the Department of Civil Aviation.

(g) Irregularities of ground and navigational facilities and hazardous conditions. A commander shall notify the appropriate ground station as soon as practicable whenever a potentially hazardous condition such as:

(1) An irregularity in a ground or navigational facility; or

(2) A meteorological phenomenon; or

(3) A volcanic ash cloud; or

(4) A high radiation level,

is encountered during flight.

BCAR-OPS 3.425 - Accident reporting

(a) An operator shall establish procedures to ensure that the nearest appropriate Department of Civil Aviation is notified by the quickest available means of any accident, involving the helicopter, resulting in serious injury (as defined in ICAO Annex 13) or death of any person or substantial damage to the helicopter or property.

(b) A commander shall submit a report to the Department of Civil Aviation of any accident on board, resulting in serious injury to, or death of, any person on board while he was responsible for the flight.

Appendix 1 to BCAR-OPS 3.270 - Stowage of baggage and cargo

(a) Procedures established by an operator to ensure that hand baggage and cargo is adequately and securely stowed must take account of the following:

(1) Each item carried in a cabin must be stowed only in a location that is capable of restraining it;

(2) Mass limitations placarded on or adjacent to stowages must not be exceeded;

(3) Under seat stowages must not be used unless the seat is equipped with a restraint bar and the baggage is of such size that it may adequately be restrained by this equipment;

(4) Items must not be stowed in toilets or against bulkheads that are incapable of restraining articles against movement forwards, sideways or upwards and unless the bulkheads carry a placard specifying the greatest mass that may be placed there;

(5) Baggage and cargo placed in lockers must not be of such size that they prevent latched doors from being closed securely;

(6) Baggage and cargo must not be placed where it can impede access to emergency equipment; and

(7) Checks must be made before take-off, before landing, and whenever the fasten

seat belts signs are illuminated or it is otherwise so ordered to ensure that baggage is stowed where it cannot impede evacuation from the aircraft or cause injury by falling (or other movement) as may be appropriate to the phase of flight.

Appendix 1 to BCAR-OPS 3.305 - Refuelling/defuelling with passengers embarking, on board or disembarking

(a) An operator must establish operational procedures for refuelling or defuelling with passengers on board, either rotors stopped or rotors turning, to ensure that the following precautions are taken:

(1) Door(s) on the refuelling side of the helicopter shall remain closed;

(2) Door(s) on the non-refuelling side of the helicopter shall remain open, weather permitting;

(3) Fire fighting facilities of the appropriate scale shall be positioned so as to be immediately available in the event of a fire; and

(4) Sufficient personnel shall be immediately available to move passengers clear of the helicopter in the event of a fire.

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

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

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

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

Appendix 1 to BCAR-OPS 3.375 - In-flight fuel management

(a) In-flight fuel checks.

(1) A commander must ensure that fuel checks are carried out in flight at regular intervals. The remaining fuel must be recorded and evaluated to:

(i) Compare actual consumption with planned consumption;

(ii) Check that the remaining fuel is sufficient to complete the flight; and

(iii) Determine the expected fuel remaining on arrival at the destination.
(2) The relevant fuel data must be recorded.

(b) In-flight fuel management.

(1) If, as a result of an in-flight fuel check, the expected fuel remaining on arrival at the destination is less than the required alternate fuel plus final reserve fuel, the commander must:

(i) Divert; or

(ii) Replan the flight in accordance with BCAR-OPS 3.295(d)(1) unless he considers it safer to continue to the destination provided that,

(2) At an on-shore destination, when two suitable, separate touchdown and lift-off areas are available and the weather conditions at the destination comply with those specified for planning in BCAR-OPS 3.340(a)(2), the commander may permit alternate fuel to be used before landing at the destination.

(c) If, as a result of an in-flight fuel check on a flight to an isolated destination heliport, that has been planned, the expected fuel remaining at the point of last possible diversion is less than the sum of:

(1) Fuel to divert to a heliport selected in accordance with BCAR-OPS 3.295(b);

(2) Contingency fuel; and

(3) Final reserve fuel, a commander must:

(4) Divert; or

(5) Proceed to the destination provided that at on-shore destinations, two suitable, separate touchdown and lift-off areas are available at the destination and the expected weather conditions at the destination comply with those specified for planning in BCAR-OPS 3.340(a)(2).

SUBPART - E ALL WEATHER OPERATIONS

BCAR-OPS 3.430 - Heliport Operating Minima - General

Note: Whenever the use of flight simulator or Synthetic Training Device is required by this Subpart, it shall be approved in accordance with the requirements of the BCARs.

(See Appendix I to BCAR-OPS 3.430)

(a) An operator shall establish, for each heliport planned to be used, heliport operating minima that are not lower than the values given in Appendix 1. The method of determination of such minima must be acceptable to the Department of Civil Aviation. 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.

Note: The above paragraph does not prohibit in-flight calculation of minima for a non-planned alternate heliport if carried out in accordance with an accepted method.

(b) In establishing the heliport operating minima which will apply to any particular operation, an operator must take full account of:

(1) The type, performance and handling characteristics of the helicopter;
(2) The composition of the flight crew, their competence and experience;

(3) The dimensions and characteristics of the FATOs/runways which may be selected for use;

(4) The adequacy and performance of the available visual and non-visual ground aids;

(5) The equipment available on the helicopter for the purpose of navigation and/or control of the flight path, as appropriate, during the take-off, the approach, the flare, the hover, the landing, roll-out and the missed approach;

(6) The obstacles in the approach, missed approach and the climb-out areas required for the execution of contingency procedures and necessary clearance;

(7) The obstacle clearance altitude/height for the instrument approach procedures; and

(8) The means to determine and report meteorological conditions.

BCAR-OPS 3.435 - Terminology

(a) Terms used in this Subpart and not defined in BCAR-1 have the following meaning:

(1) Circling. The visual phase of an instrument approach to bring an aircraft into position for landing which is not suitably located for a straight-in approach.
(2) Low Visibility Procedures (LVP). Procedures applied at a heliport for the purpose of ensuring safe operations during Category II and III approaches and Low Visibility Take-offs.

(3) Low Visibility Take-Off (LVTO). A take-off

where the Runway Visual Range (RVR) is less than 400 m.

(4) Final Approach and Take-Off area (FATO). A defined area over which the final phase of the approach maneuver to hover or landing is completed and from which the take-off maneuver is commenced and, where the FATO is to be used by helicopters operated in Performance Class 1, includes the rejected take-off area available.

(5) Visual Approach. An approach by an IFR flight when either part or all of an instrument approach procedure is not completed and the approach is executed with visual reference to the terrain.

BCAR-OPS 3.440 - Low visibility operations General operating rules

(See Appendix 1 to BCAR-OPS 3.440)
(a) An operator shall not conduct Category II or III operations unless:

(1) Each helicopter concerned is certificated for operations with decision heights below 200 ft, or no decision height, and equipped in accordance with JAR-AWO and/or FAA or an equivalent accepted by the Department of Civil Aviation;

(2) A suitable system for recording approach and/or automatic landing success and failure is established and maintained to monitor the overall safety of the operation;

(3) The operations are approved by the Department of Civil Aviation;

(4) The flight crew consists of at least 2 pilots; and

(5) Decision Height is determined by means of a radio altimeter.

(b) An operator shall not conduct low visibility take-offs in less than 150 m RVR unless approved by the Department of Civil Aviation.

BCAR-OPS 3.445 - Low visibility operations Heliport considerations

(a) An operator shall not use an heliport for Category II or III operations unless the heliport is approved for such operations by the State in which the heliport is located.

(b) An operator shall verify that Low Visibility Procedures (LVP) have been established, and will be enforced, at those heliports where low visibility operations are to be conducted.

BCAR-OPS 3.450 - Low visibility operations Training and Qualifications

(See Appendix 1 to BCAR-OPS 3.450)

(a) An operator shall ensure that, prior to conducting Low Visibility Take-Off, Category II and III operations:

(1) Each flight crew member:

(i) Completes the training and checking requirements prescribed in Appendix 1 including flight simulator training in operating to the limiting values of RVR and Decision Height appropriate to the operator's Category II/III approval; and

(ii) Is qualified in accordance with Appendix 1;

(2) The training and checking is conducted in accordance with a detailed syllabus approved by the Department of Civil Aviation and included in the Operations Manual. This training is in addition to that prescribed in BCAR-OPS 3, Subpart N; and

(3) The flight crew qualification is specific to the operation and the helicopter type.

BCAR-OPS 3.455 - Low Visibility operations Operating Procedures (LVPs)

(See Appendix 1 to BCAR-OPS 3.455)

(a) An operator must establish procedures and instructions to be used for Low Visibility Take-Off and Category II and III operations. These procedures must be included in the Operations Manual and contain the duties of flight crew members during taxing, take-off, approach, flare, the hover, landing, roll-out and missed approach as appropriate.

(b) The commander shall satisfy himself that:

(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;

(2) Appropriate LVPs 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

(3) The flight crew members are properly qualified prior to commencing a Low Visibility Take-off in an RVR of less than 150 m or a Category II or III approach.

BCAR-OPS 3.460 - Low visibility operations Minimum equipment

(a) An operator must 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 with the HFM or other approved document.

(b) The commander shall satisfy himself that the status of the helicopter and of the relevant airborne systems is appropriate for the specific operation to be conducted.

BCAR-OPS 3.465 - VFR Operating minima

(See Appendices 1 and 2 to BCAR-OPS 3.465)

(a) An operator shall ensure that:

(1) VFR flights are conducted in accordance with the Visual Flight Rules and in accordance with the Table in Appendix 1 to BCAR-OPS 3.465;

(2) Subject to sub-paragraph (3) below, in Class G airspace, helicopters are operated in a flight visibility of not less than 1500 m during daylight and not less than 5 km by night. Flight visibility may be reduced to 800 m for short periods during daylight, when in sight of land, if the helicopter is maneuvered at a speed that will give adequate opportunity to observe other traffic and any obstacles in time to avoid a collision. Low level over water 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.

(3) In Class G airspace, when flying between helidecks where the over water sector is less than 10 nm, VFR flights are conducted in accordance with Appendix 2 to BCAR-OPS 3.465; and

[(4)] Special VFR flights are not commenced when the visibility is less than 3 km and not otherwise conducted when the visibility is less than 1.5 km.

Appendix 1 to BCAR-OPS 3.430 - 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 commander 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 commander 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 commander 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 Department of Civil Aviation.

(3) Required RVR/Visibility

(i) For Performance Class 1 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

Onshore heliports with IFR departure procedures	RVR/Visibility
Nil facilities (Day)	250 m or the rejected take-off distance, whichever is the greater
Nil facilities (Night)	800 m
Unlit/unmarked defined runway/FATO	200 m
Runway edge/FATO lighting and centerline marking	200 m
Runway edge/FATO lighting, centerline lighting and RVR information	150 m
Onshore heliports without IFR departure procedures	800 m

(ii) For Performance Class 2 operations, an operator must operate to take-off minima of 800 m RVR/VIS and remain clear of cloud during the take-off maneuver or until reaching Performance Class I capabilities.

(iii) For Performance Class 3 operations an operator must operate to take-off minima of 600 ft cloud ceiling and 800 m RVR/VIS.

(iv) Table 6 below, for converting reported meteorological visibility to RVR, must not be used for calculating take-off minima.

(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 & QCH)	300ft

(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 FATO/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.

(i) For non-precision approaches by helicopters operated in Performance Class 1 or 2, the minima given in the following Table shall apply:

Table 3 - Non-precision approach minima for onshore heliports

Non-Precision Approach Minima for onshore heliports (5) (6) (7)				
MDH (feet)	Facilities/RVR			
	Full (1)	Intermediate (2)	Base (3)	Nil (4)
250-299 ft	600 m	800 m	1000 m	1000 m
300-499 ft	800 m	1000 m	1000 m	1000 m
450 ft 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 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 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, FATO/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 sub-paragraph (h) below.

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 1/2 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 Department of Civil Aviation.

(iv) Single pilot operations. For single pilot operations the minimum RVR is 800 m or the Table 3 minima whichever is higher.

(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;

(vii) 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 - Precision Approach Minima Category I – Onshore Heliports

Non-Precision Approach Minima Category 1 – Onshore Heliports (5) (6) (7)				
DH (feet	Facilities/RVR			
	Full (1)	Intermediate (2)	Base (3)	Nil (4)
200 ft	500 m	600 m	700 m	1000 m
201-250 ft	550 m	650 m	750 m	1000 m
251-300 ft	600 m	700 m	800 m	1000 m
301 ft and above	750 m	800 m	900 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 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 FATO/ runway markings, FATO/runway edge lights, threshold lights, FATO/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 paragraph (h).

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 Department of Civil Aviation.

(ii) Single pilot operations. For single pilot operations, an operator must calculate the minimum RVR for all approaches in accordance with BCAR-OPS 3.430 and 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.

(d) Onshore precision approach - Category II operations.

(1) General. A Category II operation is a precision instrument approach and landing using ILS or MLS with:
(i) A decision height below 200 ft but not lower than 100 ft; and

(ii) A runway visual range of not less than 300 m.

(2) Decision Height. An operator must ensure that the decision height for a Category II operation is not lower than:

(i) The minimum decision height specified in the HFM;

(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;

(iv) The decision height to which the flight crew is authorized to operate; or

(v) 100 ft.

(3) Visual reference. A pilot may not continue an approach below the Category II decision height determined in accordance with sub-paragraph (d)(2) above unless visual reference containing a segment of at least 3 consecutive lights being the center line of the approach lights, or touchdown zone lights, or FATO/runway center line lights, or FATO/runway edge lights, or a combination of these is attained and can be maintained. This visual reference must include a lateral element of the ground

pattern, i.e. an approach lighting crossbar or the landing threshold or a barrette of the touchdown zone lighting.

(4) Required RVR. For Category II approaches by performance class 1 helicopters the following minima shall apply:

Table 5 - RVR for Category II approach compared with the Decision Height (DH)

Precision Approach Minima Category II - Onshore Heliports	
Decision Height	Autopilot coupled to below DH (1) RVR
100-120 ft	300 m
121-140 ft	400 m
141 ft and above	450 m

Note 1: The reference to 'auto-coupled to below DH' in this table means continued use of the automatic flight control system down to a height, which is not greater than 80% of the applicable DH. Thus airworthiness requirements may, through minimum engagement height for the automatic flight control system, affect the DH to be applied.

(e) Intentionally blank

(f) Onshore circling

(1) Circling is the term used to describe the visual phase of an instrument approach, to bring an aircraft into position for landing on a FATO/runway which is not suitably located for a straight in approach.

(2) For circling the specified MDH shall not be less than 250 ft, and the meteorological visibility shall not be less than 800 m.
Note: Visual maneuvering (circling) with prescribed tracks is an accepted procedure within the meaning of this paragraph.

(g) Visual Approach. An operator shall not use an RVR of less than 800 m for a visual approach.

(h) Conversion of Reported Meteorological Visibility to RVR

(1) An operator must ensure that a meteorological visibility to RVR conversion is not used for calculating take-off minima, Category II or III minima or when a reported RVR is available.

(2) When converting meteorological visibility to RVR in all other circumstances than those in sub-paragraph (h)(1) above, an operator must ensure that the following Table is used:

Table 6 - Conversion of visibility to RVR

Lighting elements in operation	RVR = Met. Visibility multiplied by:	
	Day	Night
HI approach and runway lighting	1.5	2.0
Any type of lighting	1.0	1.5
No lighting	1.0	Not applicable

(i) Airborne Radar Approach (ARA) for over water operations

(1) General

(i) An operator shall not conduct ARAs unless authorized by the Department of Civil Aviation.
(ii) Airborne Radar Approaches are only permitted to rigs or vessels under way when a multi-crew concept is used.

(iii) A commander shall not undertake an Airborne Radar Approach unless the radar can provide course guidance to ensure obstacle clearance.

(iv) Before commencing the final approach the commander shall ensure that a clear path exists on the radar screen for the final and missed approach segments. If lateral clearance from any obstacle will be less than 1.0 nm, the commander shall:
(A) Approach to a nearby target structure and thereafter proceed visually to the destination structure; or

(B) Make the approach from another direction leading to a circling maneuver.

(v) The commander shall ensure that the cloud ceiling is sufficiently clear above the helideck to permit a safe landing.

(2) Minimum Descent Height (MDH). Notwithstanding the minima at sub-paragraphs (i) and (ii) below, the MDH shall not be less than 50 ft above the elevation of the helideck.

(i) The MDH is determined from a radio altimeter. The MDH for an airborne radar approach shall not be lower than:

(A) 200 ft by day

(B) 300 ft by night.

(ii) The MDH for an approach leading to a circling maneuver shall not be lower than:

(A) 300 ft by day

(B) 500 ft by night.

(3) Minimum descent altitude (MDA). An MDA may only be used if the radio altimeter is unserviceable. The MDA shall be a minimum of MDH + 200 ft and shall be based on a calibrated barometer at the destination or on the lowest forecast QNH for the region.

(4) Decision range. The Decision Range shall not be less than 0-75 nm unless an operator has demonstrated to the Department of Civil Aviation that a lesser Decision Range can be used at an acceptable level of safety.

(5) Visual reference. No pilot may continue an approach beyond Decision Range or below MDH/MDA unless he is visual with the destination.

(6) Single pilot operations. The MDH/MDA for a single pilot ARA shall be 100 ft higher than that calculated using sub-paragraphs (2) and (3) above. The Decision Range shall not be less than 1.0 nm.

Appendix 1 to BCAR-OPS 3.440 - Low Visibility Operations - General Operating Rules

(a) General. The following procedures apply to the introduction and approval of low visibility operations.

(b) Airborne Systems Operational Demonstration. An operator must comply with the requirements prescribed in sub-paragraph (c) below when introducing a helicopter type, which is new to ICAO into Category II or III service.
NOTE: For helicopter types already used for Category II or III operations in another similar State, the in-service proving program in paragraph (f) applies instead.

(1) Operational reliability. The Category II and III success rate must not be less than that required by BCAR-AWO.
(2) Criteria for a successful approach. An approach is regarded as successful if:

(i) The criteria are as specified in BCAR-AWO or its equivalent;

(ii) No relevant helicopter system failure occurs.

(c) Data Collection during Airborne System Demonstration. General

(1) An operator must establish a reporting system to enable checks and periodic reviews to be made during the operational evaluation period before the operator is authorized to conduct Category II or III operations. The reporting system must cover all successful and unsuccessful approaches, with reasons for the latter, and include a record of system component failures. This reporting system must be based upon flight crew reports and automatic recordings as prescribed in paragraphs (d) and (e) below.

(2) The recordings of approaches may be made during normal line flights or during other flights performed by the operator.

(d) Data Collection during Airborne System Demonstration - Operations with DH not less than 50 ft.

(1) For operations with DH not less than 50 ft, data must be recorded and evaluated by the operator and evaluated by the Department of Civil Aviation when necessary.

(2) It is sufficient for the following data to be recorded by the flight crew:

(i) Heliport and runway used;

(ii) Weather conditions;

(iii) Time;

(iv) Reason for failure leading to an aborted approach;

(v) Adequacy of speed control;

(vi) Trim at time of automatic flight control system disengagement;

(vii) Compatibility of automatic flight control system, flight director and raw data;

(viii) An indication of the position of the helicopter relative to the ILS centerline when descending through 30 m (100 ft); and

(ix) Touchdown position.

(3) The number of approaches, as approved by the Department of Civil Aviation, made during the initial evaluation must be sufficient to demonstrate that the performance of the system in actual airline service is such that a 90% confidence and a 95% approach success will result.

(e) Data Collection during Airborne System Demonstration - Operations with DH less than 50 ft or no DH

(1) For operations with DH less than 50 ft or no DH, a flight data recorder, or other equipment giving the appropriate information, must be used in addition to the flight crew reports to confirm that the system performs as designed in actual airline service. The following data is required:

(i) Distribution of ILS deviations at 30 m (100 ft), at touchdown and, if appropriate, at disconnection of the roll-out control system and the maximum values of the deviations between those points and

(ii) Sink rate at touchdown.

(2) Any landing irregularity must be fully investigated using all available data to determine its cause.

(f) In-service proving
Note: An operator fulfilling the requirements of sub-paragraph (b) above will be deemed to have satisfied the in-service proving requirements contained in this paragraph.

(1) The system must demonstrate reliability and performance in line operations consistent with the operational concepts. A sufficient number of successful landings, as determined by the Department of Civil Aviation, must be accomplished in line operations, including training flights, using the auto land and roll-out system installed in each helicopter type.

(2) The demonstration must be accomplished using a Category II or Category III ILS. However, if the operator chooses to do so, demonstrations may be made on other ILS facilities if sufficient data is recorded to determine the cause of unsatisfactory performance.

(3) If an operator has different variants of the same type of helicopter utilizing the same basic flight control and display systems, or different basic flight control and display systems on the same type of helicopter, the operator shall show that the variants comply with the basic system performance criteria, but the operator need not conduct a full operational demonstration for each variant.

(4) Where an operator introduces a helicopter type, which has already been approved by the Department of Civil Aviation of any ICAO State for Category II and/or III operations, a reduced proving program may be approved.

(g) Continuous Monitoring

(1) After obtaining the initial authorization, the operations must be continuously monitored by the operator to detect any undesirable trends before they become hazardous. Flight crew reports may be used to achieve this.

(2) The following information must be retained for a period of 12 months:

(i) The total number of approaches, by helicopter type, where the airborne Category II or III equipment was utilized to make satisfactory, actual or practice, approaches to the applicable Category II or III minima; and

(ii) Reports of unsatisfactory approaches and/or automatic landings, by heliport and helicopter registration, in the following categories:

(A) Airborne equipment faults;

(B) Ground facility difficulties;

(C) Missed approaches because of ATC instructions; or

(D) Other reasons.

(3) An operator must establish a procedure to monitor the performance of the automatic landing system of each helicopter.

(h) Transitional periods

(1) Operators with no previous Category II or III experience

(i) An operator without previous Category II or III operational experience may be approved for Category II or IIIA operations, having gained a minimum experience of 6 months of Category I operations on the helicopter type.

(ii) On completing 6 months of Category II or IIIA operations on the helicopter type the operator may be approved for Category IIIB operations. When granting such an approval, the Department of Civil Aviation may impose higher minima than the lowest applicable for an additional period. The increase in minima will normally only refer to RVR and/or a restriction against operations

with no decision height and must be selected such that they will not require any change of the operational procedures.

(2) Operators with previous Category II or III experience. An operator with previous Category II or III experience may obtain authorization for a reduced transition period by application to the Department of Civil Aviation.

(i) Maintenance of Category II, Category III and LFTO equipment. Maintenance instructions for the on-board guidance systems must be established by the operator, in liaison with the manufacturer, and included in the operator's helicopter maintenance program prescribed in BCAR-OPS 3.910, which must be approved by the Department of Civil Aviation.

Appendix 1 to BCAR-OPS 3.450 - Low Visibility Operations - Training & Qualifications

(a) General. An operator must ensure that flight crew member training programs for Low Visibility Operations include structured courses of ground, flight simulator and/or flight training. The operator may abbreviate the course content as prescribed by sub-paragraphs (2) and (3) below provided the content of the abbreviated course is acceptable to the Department of Civil Aviation.

(1) Flight crew members with no Category II or Category III experience must complete the full training program prescribed in sub-paragraphs (b), (c) and (d) below.

(2) Flight crew members with Category II or Category III experience with another ICAO operator may undertake an abbreviated ground training course.

(3) Flight crew members with Category II or Category III experience with the operator may undertake an abbreviated ground, flight simulator and/or flight training course. The abbreviated course is to include at least the requirements of sub-paragraphs (d)(1), (d)(2)(i) or (d)(2)(ii) as appropriate and (d)(3)(i).

(b) Ground Training. An operator must ensure that the initial ground training course for Low Visibility Operations covers at least:

(1) The characteristics and limitations of the ILS and/or MLS;

(2) The characteristics of the visual aids;

(3) The characteristics of fog;

(4) The operational capabilities and limitations of the particular airborne system;

(5) The effects of precipitation, ice accretion, low level wind shear and turbulence;

(6) The effect of specific helicopter malfunctions;

(7) The use and limitations of RVR assessment systems;

(8) The principles of obstacle clearance requirements;

(9) Recognition of and action to be taken in the event of failure of ground equipment;

(10) The procedures and precautions to be followed with regard to surface movement during operations when the RVR is 400 m or less and any additional procedures required for take-off in conditions below 150 m;

(11) The significance of decision heights based upon radio altimeters and the effect of terrain profile in the approach area on radio altimeter readings and on the automatic approach/landing systems;

(12) The importance and significance of Alert Height if applicable and the action in the event of any failure above and below the Alert Height;

(13) The qualification requirements for pilots to obtain and retain approval to conduct Low Visibility Take-offs and Category II or III operations; and

(14) The importance of correct seating and eye position.

(c) Flight Simulator training and/or flight training

(1) An operator must ensure that flight simulator and/or flight training for Low Visibility Operations includes:

(i) Checks of satisfactory functioning of equipment, both on the ground and in flight;

(ii) Effect on minima caused by changes in the status of ground installations;

(iii) Monitoring of automatic flight control systems and auto land status enunciators with emphasis on the action to be taken in the event of failures of such systems;

(iv) Actions to be taken in the event of failures such as engines, electrical systems, hydraulics or flight control systems;

(v) The effect of known unserviceabilities and use of minimum equipment lists;

(vi) Operating limitations resulting from airworthiness certification;

(vii) Guidance on the visual cues required at decision height together with information on maximum deviation allowed from glide path or localizer; and

(viii) The importance and significance of Alert Height if applicable and the action in the event of any failure above and below the Alert Height.

(2) An operator must ensure that each flight crew member is trained to carry out his duties and instructed on the coordination required with other crew members.

Maximum use should be made of suitably equipped flight simulators for this purpose.

(3) Training must be divided into phases covering normal operation with no helicopter or equipment failures but including all weather conditions, which may be encountered and detailed scenarios of helicopter and equipment failure, which could affect Category II or III operations. If the helicopter system involves the use of hybrid or other special systems (such as head up displays or enhanced vision equipment) then flight crew members must practice the use of these systems in normal and abnormal modes during the flight simulator phase of training.

(4) Incapacitation procedures appropriate to Low Visibility Take-Offs and Category II and III operations shall be practiced.

(5) For helicopters with no type specific flight simulator, operators must ensure that the flight training phase specific to the visual scenarios of Category II operations is conducted in a flight simulator approved for that purpose by the Department of Civil Aviation. Such training must include a minimum of 4 approaches. The training and procedures that are type specific shall be practiced in the helicopter.
(6) Category II and III training shall include at least the following exercises:

(i) Approach using the appropriate flight guidance, autopilots and control systems installed in the helicopter, to the appropriate decision height and to include transition to visual flight and landing;

(ii) Approach with all engines operating using the appropriate flight guidance systems, autopilots and control systems installed in the helicopter down to the appropriate decision height followed by missed approach; all without external visual reference;

(iii) Where appropriate, approaches utilizing

automatic flight systems to provide automatic flare, hover, landing and roll-out; and

(iv) Normal operation of the applicable system both with and without acquisition of visual cues at decision height.

(7) Subsequent phases of training must include at least:

(i) Approaches with engine failure at various stages on the approach;

(ii) Approaches with critical equipment failures (e.g. electrical systems, auto flight systems, ground and/or airborne ILS/MLS systems and status monitors);

(iii) Approaches where failures of auto flight equipment at low level require either;

(A) Reversion to manual flight to control flare, hover, landing and roll out or missed approach; or

(B) Reversion to manual flight or a downgraded automatic mode to control missed approaches from, at or below decision height including those which may result in a touchdown on the runway;

(iv) Failures of the systems which will result in excessive localizer and/or glide slope deviation, both above and below decision height, in the minimum visual conditions authorized for the operation. In addition, a continuation to a manual landing must be practiced if a head-up display forms a downgraded mode of the automatic system or the head-up display forms the only flare mode; and

(v) Failures and procedures specific to helicopter type or variant.
(8) The training program must provide practice in handling faults, which require a reversion to higher minima.

(9) The training program must include the handling of the helicopter when, during a fail passive Category III approach, the fault causes the autopilot to disconnect at or below decision height when the last reported RVR is 300 m or less.

(10) Where take-offs are conducted in RVRs of 400 m and below, training must be established to cover systems failures and engine failure resulting in continued as well as rejected take-offs.

(d) Conversion Training Requirements to conduct Low Visibility Take-off and Category II and III Operations. An operator shall ensure that each flight crew member completes the following Low Visibility Procedures training if converting to a new type or variant of helicopter in which Low Visibility Take-off and Category II and III Operations will be conducted. The flight crew member experience requirements to undertake an abbreviated course are prescribed in sub-paragraphs (a)(2) and (a)(3), above

(1) Ground Training. The appropriate requirements prescribed in sub-paragraph (b) above, taking into account the flight crew member's Category II and Category III training and experience.

(2) Simulator Training and/or Flight training.

(i) A minimum of 8 approaches and/or landings in a flight simulator approved for the purpose.

(ii) Where no type-specific flight simulator is available, a minimum of 3 approaches including at least 1 go-around is required on the helicopter.

(iii) Appropriate additional training if any special equipment is required such as head-up displays or enhanced vision equipment.

(3) Flight Crew Qualification. The flight crew qualification requirements are specific to the operator and the type of helicopter operated.

(i) The operator must ensure that each flight crew member completes a check before conducting Category II or III operations.

(ii) The check prescribed in sub-paragraph (i) above may be replaced by successful completion of the flight simulator and/or flight training prescribed in sub-paragraph (d)(2) above.

(4) Line Flying under Supervision. An operator must ensure that each flight crew member undergoes the following line flying under supervision:

(i) For Category II when a manual landing is required, a minimum of 3 landings from autopilot disconnect;

(ii) For Category III, a minimum of 3 auto lands except that only 1 auto land is required when the training required in sub-paragraph (d)(2) above has been carried out in a full flight simulator usable for zero flight time training.

(e) Type and command experience. The following additional requirements are applicable to commanders who are new to the helicopter type:

(1) 50 hours or 20 sectors as pilot-in-command on the type before performing any Category II or Category III operation; and

(2) 100 hours or 40 sectors as pilot-in-command on the type. 100 m must be added to the applicable Category II or Category III RVR minima unless he has been previously qualified for Category II or III operations with a ICAO operator.

(3) The Department of Civil Aviation may authorize a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.

(f) Low Visibility Take-Off with RVR less than 150 m

(1) An operator must ensure that prior to authorization to conduct take-offs in RVRs below 150 m the following training is carried out:

(i) Normal take-off in minimum authorized RVR conditions;

(ii) Take-off in minimum authorized RVR conditions with an engine failure at or after TDP; and

(iii) Take-off in minimum authorized RVR conditions with an engine failure before the TDP.

(2) An operator must ensure that the training required by sub-paragraph (1) above is carried out in an approved flight simulator. This training must include the use of any special procedures and equipment. Where no approved flight simulator exists, the Department of Civil Aviation may approve such training in a helicopter without the requirement for minimum RVR conditions. (See Appendix 1 to BCAR-OPS 3.965.)

(3) An operator must ensure that a flight crew member has completed a check before conducting low visibility take-offs in RVRs of less than 150 m if applicable. The check may only be replaced by successful completion of the flight simulator and/or flight training prescribed in sub-paragraph (f)(1) on initial conversion to a helicopter type.

(g) Recurrent Training and Checking - Low Visibility Operations

(1) An operator must ensure that, in conjunction with the normal recurrent training and operator proficiency checks, a pilot's knowledge and ability to perform the tasks associated with the particular category of operation, including LVTO, for which he is authorized is checked. The required number of approaches to be conducted during such recurrent training is to be a minimum of two,

one of which is to be a missed approach and at least one low visibility take off to the lowest applicable minima. The period of validity for this check is 6 months including the remainder of the month of issue.

(2) For Category III operations an operator must use a flight simulator approved for Category III training.

(3) An operator must ensure that, for Category III operations on helicopters with a fail passive flight control system, a missed approach is completed at least once every 18 months as the result of an autopilot failure at or below decision height when the last reported RVR was 300 m or less.

(4) The Department of Civil Aviation may authorize recurrent training for Category II operations in a helicopter type where no approved flight simulator is available.

(h) LVTO and Category II/III Recency Requirements

(1) An operator must ensure that, in order for pilots to maintain a Category II and Category III qualification, they have conducted a minimum of 3 approaches and landings using approved Category II/III procedures during the previous six month period, at least one of which must be conducted in the helicopter.

(2) Recency for LVTO is maintained by retaining the Category II or III qualification prescribed in sub-paragraph (h)(1) above.

(3) An operator may not substitute this recency requirement for recurrent training.
Appendix 1 to BCAR-OPS 3.455 - Low Visibility Operations - Operating procedures

(a) General. Low Visibility Operations include:

(1) Manual take-off (with or without electronic guidance systems);

(2) Auto-coupled approach to below DH, with manual flare, hover, landing and roll-out;

(3) Auto-coupled approach followed by auto-flare, hover, auto landing and manual roll-out; and

(4) Auto-coupled approach followed by auto-flare, hover, auto landing and auto-roll-out, when the applicable RVR is less than 400 m.

Note 1: A hybrid system may be used with any of these modes of operations.

Note 2: Other forms of guidance systems or displays may be certificated and approved.

(b) Procedures and Operating Instructions

(1) The precise nature and scope of procedures and instructions given depend upon the airborne equipment used and the flight deck procedures followed. An operator must clearly define flight crew member duties during take-off, approach, flare, hover, roll-out and missed approach in the Operations Manual. Particular emphasis must be placed on flight crew responsibilities during transition from non-visual conditions to visual conditions, and on the procedures to be used in deteriorating visibility or when failures occur. Special attention must be paid to the distribution of flight deck duties so as to ensure that the workload of the pilot making the decision to land or execute a missed approach enables him to devote himself to supervision and the decision making process.
(2) An operator must specify the detailed operating procedures and instructions in the Operations Manual. The instructions must be compatible with the limitations and mandatory procedures contained in the Helicopter Flight Manual and cover the following items in particular:

(i) Checks for the satisfactory functioning of the helicopter equipment, both before

departure and in flight;

(ii) Effect on minima caused by changes in the status of the ground installations and airborne equipment;

(iii) Procedures for the take-off, approach, flare, hover, landing, roll-out and missed approach;

(iv) Procedures to be followed in the event of failures, warnings and other non-normal situations;

(v) The minimum visual reference required;

(vi) The importance of correct seating and eye position;

(vii) Action which may be necessary arising from a deterioration of the visual reference;

(viii) Allocation of crew duties in the carrying out of the procedures according to sub-paragraphs (i) to (iv) and (vi) above, to allow the commander to devote himself mainly to supervision and decision making;

(ix) The requirement for all height calls below 200 ft to be based on the radio altimeter and for one pilot to continue to monitor the helicopter instruments until the landing is completed;

(x) The requirement for the Localizer Sensitive Area to be protected;

(xi) The use of information relating to wind velocity, wind shear, turbulence, runway contamination and use of multiple RVR assessments;

(xii) Procedures to be used for practice approaches and landing on runways at which the full Category II or Category III heliport procedures are not in force;

(xiii) Operating limitations resulting from airworthiness certification; and

(xiv) Information on the maximum deviation allowed from the ILS glide path and/or localizer.

Appendix 1 to BCAR-OPS 3.465 - Minimum Visibilities for VFR Operations

Airspace Classification	B	C D E	F	G
			Above 900 m (3000 ft) AMSL or above 300 m (1000 ft) above terrain, whichever is the higher	At and below 900 m (3000ft) or 300 m (1000 ft) above terrain, whichever is the higher
Distance from cloud	Clear of cloud	1500 m horizontally 300 m (1000 ft) vertically		Clear of cloud and in sight of the surface
Flight Visibility	8 km at and above 3050 m (10000 ft) AMSL (Note 1) 5 km below 3050 m (10000 ft) AMSL			5 km (Note 2)

Note 1: When the height of the transition altitude is lower than 3050 m (10 000 ft) AMSL, FL 100 should be used in lieu of 10 000 ft.

Note 2: Helicopters may be operated in flight visibilities down to 1500 m, provided the appropriate Department of Civil Aviation permits use of a flight visibility less than 5 km, and the circumstances are such, that the probability of encounters with other traffic is low, and the IAS is 140 kts or less. When so prescribed by the Department of Civil Aviation, helicopters may be permitted to operate down to a flight visibility of 800 m by day in Class G airspace.

Appendix 2 to BCAR-OPS 3.465 - Minima for flying between helidecks located in Class G airspace

	Day		Night	
	Height (Note 1)	Visibility	Height (Note 1)	Visibility
Single pilot	300 ft	3 km	500 ft	5 km
Two Pilots	300 ft	2km (Note 2)	500 ft	5 km (Note 3)

Note 1: The cloud base shall be such as to allow flight at the specified height below and clear of cloud

Note 2: Helicopters may be operated in flight visibility down to 800 m provided the destination or an intermediate structure are continuously visible.

Note 3: Helicopters may be operated in flight visibility down to 1500 m provided the destination or an intermediate structure are continuously visible.

SUBPART - F PERFORMANCE GENERAL

BCAR-OPS 3.470 - Applicability

(a) An operator shall ensure that helicopters which have 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 BCAR-OPS 3, Subpart G (Performance Class 1);

(b) Unless otherwise prescribed by sub-paragraph (a) above, an operator shall ensure that helicopters which have a maximum approved passenger seating configuration of 19 or less but more than 9 are operated in accordance with BCAR-OPS Part 3, Subpart G or H (Performance Class 1 or 2);

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

BCAR-OPS 3.475 - 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 replanning

(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 Department of Civil Aviation 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.

BCAR-OPS 3.480 - Terminology

(a) Terms used in Subparts F, G, H, I and J and not defined in BCAR-1 have the following meaning:

(1) 'Category A' with respect to helicopters means multi-engine helicopters designed with engine and system isolation features specified in BCAR-27/29 or equivalent acceptable to ICAO and Helicopter Flight Manual performance information based on a critical engine failure concept which assures adequate designated surface area and adequate performance capability for

continued safe flight in the event of an engine failure.

(2) 'Category B' with respect to helicopters means single-engine or multi-engine helicopters, which do not fully meet all Category, A standards. Category B helicopters have no guaranteed stay-up ability in the event of engine failure and unscheduled landing is assumed.

(3) Committal Point (CP). The committal point is defined as the point in the approach at which the pilot flying (PF) decides that, in the event of a power unit failure being recognized, the safest option is to continue to the deck.

(4) Congested area. In relation to a city, town or settlement, any area which is substantially used for residential, commercial or recreational purposes (See also definitions of hostile and non-hostile environment).

(5) Defined point after take-off (DPATO). The point, within the take-off and initial climb phase, before which the helicopter's ability to continue the flight safely, with the critical power unit inoperative, is not assured and a forced landing may be required.
(6) Defined point before landing (DPBL). The point within the approach and landing phase, after which the helicopter's ability to continue the flight safely, with the critical power unit inoperative, is not assured and a forced landing may be required.

Note: Defined points apply to helicopters operated in Performance Class 2 only.

(7) Distance DR. DR is the horizontal distance that the helicopter has travelled from the end of the take-off distance available.

(8) Elevated heliport. A heliport, which is, at least 3 m above the surrounding surface.

(9) Exposure time. The actual period during which the performance of the helicopter with the critical power unit inoperative in still air does not guarantee a safe forced landing or the safe continuation of the flight. (See also definition of maximum permitted exposure time).]

(10) Helideck. A heliport located on a floating or fixed off-shore structure.

(11) Heliport. An aerodrome or a defined area of land, water or a structure used or intended to be used wholly or in part for the arrival, departure and surface movement of helicopters.

(12) Hostile environment:

(i) An environment in which:

(A) A safe forced landing cannot be accomplished because the surface is inadequate; or

(B) The helicopter occupants cannot be adequately protected from the elements; or

(C) Search and rescue response/capability is not provided consistent with anticipated exposure; or
(D) There is an unacceptable risk of endangering persons or property on the ground:

(ii) In any case, the following areas shall be considered hostile:

(A) For over water operations, the open sea areas North of 45N and South of 45S designated by the Department of Civil Aviation of the State concerned; and

(B) Those parts of a congested area without adequate safe forced landing areas.

(13) Landing decision point (LDP). The point used in determining landing performance from which, a power unit failure having been recognized at this point, the landing may be safely continued or a baulked landing

initiated.

(14) Landing distance available. The length of the final approach and take-off area plus any additional area declared available and suitable for helicopters to complete the landing maneuver from a defined height.

(15) Landing distance required. The horizontal distance required to land and come to a full stop from a point 107 m (35 ft) above the landing surface.
(16) Maximum approved passenger seating configuration. The maximum passenger seating capacity of an individual helicopter, excluding crew seats, used by the operator, approved by the Department of Civil Aviation and included in the Operations Manual.

(17) Maximum permitted exposure time. A period, determined on the basis of the power unit failure rate recorded for the helicopter's engine type, during which the probability of a power unit failure can be discounted. (See also definition of exposure time).]

(18) Non-hostile environment.

(i) An environment in which:
(A) A safe forced landing can be accomplished; and

(B) The helicopter occupants can be protected from the elements; and

(C) Search and rescue response/capability is provided consistent with the anticipated exposure;

(ii) In any case, those parts of a congested area with adequate safe forced landing areas shall be considered non-hostile.

(19) Obstacle. Obstacles include the surface of the earth, whether land or sea.

(20) Performance Class 1. Performance Class 1 operations are those with performance such that, in the event of failure of the critical power unit, the helicopter is able to land within the rejected take-off distance available or safely continue the flight to an appropriate landing area, depending on when the failure occur.

(21) Performance Class 2. Performance Class 2 operations are those operations such that, in the event of critical power unit failure, performance is available to enable the helicopter to safely continue the flight, except when the failure occurs early during the take-off maneuver or late in the landing maneuver, in which cases a forced landing may be required.

(22) Performance Class 3. Performance Class 3 operations are those operations such that, in the event of a power unit failure at any time during the flight, a forced landing may be required in a multi-engine helicopter but will be required in a single engine helicopter.

(23) Rejected take-off distance required. The horizontal distance required from the start of the take-off to the point where the helicopter comes to a full stop following a power unit failure and rejection of the take-off at the take-off decision point.

(24) Reported headwind component. Reported headwind component is interpreted as being that reported at the time of flight planning and may be used provided there is no significant change of unfactored wind prior to take-off.

(25) Rotation Point (RP). The rotation point is defined as the point at which a cyclic input is made to initiate a nose-down attitude change during the take-off flight path. It is the last point in the take-off path from which, in the event of an engine failure being recognized, a forced landing on the deck can be achieved.

(26) R. Rotor radius.

(27) Safe forced landing. Unavoidable landing or ditching with a reasonable

expectancy of no injuries to persons in the aircraft or on the surface.

(28) Take-off decision point (TDP). The point used in determining take-off performance from which, a power unit failure having been recognized at this point, either a rejected take-off may be made or a take-off safely continued.
(29) Take-off distance available. The length of the final approach and take-off area plus the length of helicopter clearway (if provided) declared available and suitable for helicopters to complete the take-off.

(30) Take-off distance required. The horizontal distance required from the start of the take-off to the point at which VTOSS, a height of 10.7 m (35 ft) above the take-off surface, and a positive climb gradient are achieved, following failure of the critical power unit at TDP, the remaining power units within approved operating limits.

(31) Take-off mass. The take-off mass of the helicopter shall be taken to be its mass, including everything and everyone carried at the commencement of the take-off.

(32) Touchdown and lift-off area (TLOF). A load bearing area on which a helicopter may touch down or lift off.

(33) Vy. Best rate of climb speed.

(b) The terms 'take-off distance required', 'take-off flight path', 'critical power unit inoperative enroute flight path' all have their meanings defined in the airworthiness requirements under which the helicopter was certificated, or as specified by the Department of Civil Aviation if it finds the data provided in the Helicopter Flight Manual inadequate for showing compliance with the performance operating limitations.

SUBPART - G PERFORMANCE CLASS 1

BCAR-OPS 3.485 - General

An operator shall ensure that helicopters operated in Performance Class 1 are certificated in Category A.

BCAR-OPS 3.490 - Take-off

(a) An operator shall ensure that:
(1) The take-off mass does not exceed the maximum take-off mass specified in the Helicopter Flight Manual's Category A performance section for the pressure altitude and the ambient temperature at the heliport of departure.

(2) For Non-elevated Heliports the take-off mass is such that:

(i) The rejected take-off distance required does not exceed the rejected take-off distance available; and

(ii) The take-off distance required does not exceed the take-off distance available.

(3) For elevated heliports and helidecks the take-off mass does not exceed the maximum take-off mass specified in the Helicopter Flight Manual for the take-off procedure being used and is such that the helicopter is capable of:
(i) In the event of a critical power unit failure being recognized at or before the take-off decision point TDP, rejecting the take-off and landing on the elevated heliport or helideck; and

(ii) In the event of a critical power unit failure being recognized at or after TDP, continuing the take-off, clearing the elevated heliport or helideck and thereafter clearing all obstacles under the flight path of the] helicopter by a vertical margin of at least 35 ft up to the end of the take-off distance required. Obstacle clearance margins in excess of 35 ft may be specified by the Department of Civil Aviation at a particular heliport.

(b) When showing compliance with sub-

paragraph (a) above, account shall be taken of the following parameters at the heliport of departure:

(1) The pressure altitude;

(2) The ambient temperature;

(3) The take-off procedure to be used; and

(4) Not more than 50% of the reported head-wind component or, if such data is provided, not less than 150% of the reported tail-wind component.

(c) The part of the take-off up to and including TDP shall be conducted in sight of the surface such that a rejected take-off can be carried out.

BCAR-OPS 3.495 - Take-off Flight Path

(a) An operator shall ensure that, assuming that the critical power unit failure has been recognized at the TDP.

(1) The take-off flight path with the critical power unit inoperative clears all] obstacles by a vertical margin of not less than 10.7 m (35 ft) in VFR and at least 35 ft plus 0.01 DR in IFR. An obstacle need not be considered if its lateral margin from the nearest point on the surface below the intended flight path exceeds 30 m or 1.5 times the overall length of the helicopter, whichever is greater, plus

(i) 0.15 DR for VFR operations; or

(ii) 0.30 DR for IFR operations.

(b) When showing compliance with sub-paragraph (a) above:

(1) Obstacles may be disregarded if they are situated beyond:

(i) 7R for day operations if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;

(ii) 10R for night operations if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;

(iii) 300 m if navigational accuracy can be achieved by navigation aids; and

(iv) 900 m in the other cases.

(2) Where a change of direction of more than 15° is made, vertical obstacle clearance requirements are to be increased by 5 m (15 ft) from the point at which the turn is initiated. This turn is not to be initiated before reaching a height of 30 m (100 ft) above the take-off surface.

(c) When showing compliance with sub-paragraph (a) above, account shall be taken of the following parameters at the heliport of departure:

(1) The mass of the helicopter at the commencement of the take-off;

(2) The pressure altitude;

(3) The ambient temperature; and

(4) Not more than 50% of the reported head-wind component when planning or, if such data is provided, not less than 150% of the reported tail-wind component.

BCAR-OPS 3.500 - En-route - critical power unit inoperative

(a) An operator shall ensure that:

(1) The en-route flight path with the critical power unit inoperative, appropriate to the meteorological conditions expected for the flight complies with either sub-paragraph (2) or
(3) below at all points along the route.

(2) When it is intended that the flight will be conducted at any time out of sight of the

surface, the mass of the helicopter permits a rate of climb of at least 50 ft/minute with the critical power unit inoperative at an altitude of at least 300 m (1000 ft) [600 m (2000 ft) in areas of mountainous terrain above all obstacles along the route within 18.5 km (10 nm) on either side of the intended track. When it is intended that the flight will be conducted in VMC and in sight of the surface, the same requirement applies except that only obstacles within 900 m on either side of the route need be considered.

(3) The flight path permits the helicopter to continue flight from the cruising altitude to a height of 300 m (1000 ft) above the heliport where a landing can be made in accordance with BCAR-OPS 3.510. The flight path clears vertically, by at least 300 m (1000 ft) 600 m (2000 ft) in areas of mountainous terrain all obstacles along the route within 18.5 km (10 nm) on either side of the intended track. The critical power unit is assumed to fail at the most critical point along the route. When it is intended that the flight will [be conducted in VMC and in sight of the] surface, the same requirement applies except that only obstacles within 900 m in either side of the route need be considered. Drift-down techniques may be used.

(4) Account is taken of the effects of winds on the flight path.

(5) Fuel jettisoning is planned to take place only to an extent consistent with reaching the heliport with the required fuel reserves and using a safe procedure.
(6) Fuel jettisoning is not planned below 1000 ft above terrain.

(b) When showing compliance with this paragraph, the width margins of sub-paragraphs (a)(2) and (a)(3) above may be reduced to 9.3 km (5 nm) if the required navigational accuracy can be achieved.

BCAR-OPS 3.505

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BCAR-OPS 3.510 - Landing

(a) An operator shall ensure that:
(1) The landing mass of the helicopter at the estimated time of landing does not exceed the maximum mass specified in the Helicopter Flight Manual's category A performance section for the pressure altitude and the ambient temperature expected for the estimated time of landing at the destination heliport, or any alternate if required.

(2) For Non-elevated Heliports, the landing mass is such that, in the event of a critical power unit failure being recognized at any point during the approach and landing phase the helicopter is capable of:

(i) In the event of a critical power unit failure being recognized at or before the landing decision point (LDP), performing a baulked landing, clearing all obstacles under the flight path; and

(ii) In the event of a critical power unit failure being recognized at or after the LDP, landing and stopping within the landing distance available at the heliport.

(3) For Elevated Heliports and Helidecks, the landing mass does not exceed the maximum landing mass approved for the landing procedure being used and is such that the helicopter is capable of:

(i) In the event of a critical power unit failure being recognized at or before LDP, performing a baulked landing, clearing the elevated heliport or helideck and thereafter clearing all obstacles under the flight path.

(ii) In the event of a critical power unit failure being recognized at or after the LDP, landing on the elevated heliport or helideck.

(b) When showing compliance with sub-paragraph (a) above, account shall be taken of the following parameters for the estimated time of landing at the destination heliport or any alternate if required:

(1) The pressure altitude;

(2) The ambient air temperature;

(3) The landing procedure to be used;
(4) Not more than 50% of the expected head-wind component; and

(5) Any expected variation in the mass of the helicopter during flight.

(c) That part of the landing from the LDP to touchdown shall be conducted in sight of the surface.

SUBPART - H PERFORMANCE CLASS 2

BCAR-OPS 3.515 - General

(a) An operator shall ensure that:

(1) Helicopters operated in Performance Class 2 are certificated in Category A.

(2) Operations in Performance Class 2 other than those complying with BCAR-OPS 3.517 are not conducted from or to either elevated heliports or helidecks:

(i) At night; or

(ii) When located in a hostile environment.

BCAR-OPS 3.517 - Applicability

(a) Performance Class 2 operations from or to helidecks or from or to elevated heliports in a non-hostile environment or a non-congested hostile environment, may be conducted with an exposure time to a power unit failure during take-off or landing until 31 December 2009, provided the operator has been granted a relevant approval by the Department of Civil Aviation (See Appendix 1 to BCAR-OPS 3.517(a), BCAR-OPS 3.520, BCAR-OPS 3.535).

(b) Performance Class 2 operations from/to either elevated heliports in a non-congested hostile environment or helidecks, not approved under sub-paragraph (a) above, may continue until 31 March 2005, provided they are conducted in accordance with procedures approved by the Department of Civil Aviation,

BCAR-OPS 3.520 - Take-off

(a) An operator shall ensure that:

(1) The take-off mass does not exceed the maximum mass specified for a rate of climb of 150 ft/min 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.

(2) For operations without an approval to operate with an exposure time:

(i) The take-off mass does not exceed the maximum take-off mass specified for the take-off procedure being used and is such that the helicopter is capable of:

(A) In the event of the critical power unit failure being recognized at or before the defined point after take-off (DPATO), carrying out a safe forced landing on the heliport or on the surface; and

(B) In the event of the critical power unit failure being recognized after the DPATO, continuing the flight.

(ii) The part of the take-off during which the critical power unit failure may lead to a forced landing is conducted only over a surface that permits a safe forced landing to be executed in the event of the critical power unit failure.

(3) For operations on helidecks or elevated heliports located in a non hostile environment, with an approval to operate with an exposure time (see BCAR-OPS 3.517(a)):

(i) The take-off mass does not exceed the maximum take-off mass specified for the take-off procedure being used and is such that the helicopter is capable of:

(A) In the event of the critical power unit failure being recognized between the end of the exposure time and the DPATO, carrying out a safe forced landing on the heliport or on the surface; and

(B) In the event of the critical power unit failure being recognized after the DPATO, continuing the flight.

(ii) The part of the take-off between the end of the exposure time and the DPATO is conducted only over a surface that permits a safe forced landing to be executed in the event of the critical power unit failure.

(iii) If the critical power unit failure occurs during the exposure time a safe force landing may not be possible.

(4) For operations on helidecks or elevated heliports located in a non-congested hostile environment, with an approval to operate with an exposure time (See BCAR-OPS 3.517(a)):

(i) The take-off mass does not exceed the maximum take-off mass specified for the take-off procedure being used and is such that, in the event of the critical power unit failure being recognized after the end of the exposure time, the helicopter is capable of continuing the flight.

(ii) If the critical power unit failure occurs during the exposure time a safe force landing may not be possible.

(b) When showing compliance with sub-paragraph (a) above, account shall be taken of the following parameters at the heliport of departure:
(1) The pressure altitude;

(2) The ambient temperature;

(3) The take-off procedure to be used; and

(4) Not more than 50% head-wind component in the meteorological conditions report or, if such data is provided, not less than 150% tail-wind component in the meteorological conditions report.

(c) The part of the take-off prior to or at the DPATO shall be conducted in sight of the surface.

BCAR-OPS 3.525 - Take-off Flight Path

(a) An operator shall ensure that, after the DPATO:

(1) The take-off flight path with the critical power unit inoperative clears all obstacles by a vertical margin of not less than 10.7 m (35 ft) in VFR and at least 35 ft plus 0.01 DR in IFR. An obstacle need not be considered if its lateral margin from the nearest point on the surface below the intended flight path exceeds 30 m or 1.5 times the overall length of the helicopter, whichever is greater, plus

(i) 0.15 DR for VFR operations; or

(ii) 0.30 DR for IFR operations.

(b) When showing compliance with sub-paragraph (a) above:

(1) Obstacles may be disregarded if they are situated beyond:

(i) 7R for day operations if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;

(ii) 10R for night operations if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;

(iii) 300 m if navigational accuracy can be achieved by navigation aids; and

(iv) 900 m in the other cases.

(2) Where a change of direction of more than 15° is made, vertical obstacle clearance requirements are to be increased by 5 m (15 ft) from the point at which the turn is initiated. This turn is not to be initiated before reaching a height of 30 m (I 00 ft) above the take-off surface.

(c) When showing compliance with sub-paragraph (a) above, account shall be taken of the following parameters at the heliport of departure:

(1) The mass of the helicopter at the commencement of the take-off;

(2) The pressure altitude;

(3) The ambient temperature; and

(4) Not more than 50% of the reported head-wind component when planning or, if such data is provided, not less than 150% of the reported tail-wind component.

BCAR-OPS 3.530 - En-route - Critical power unit inoperative

(a) An operator shall ensure that:

(1) The en-route flight path with the critical power unit inoperative, appropriate to the meteorological conditions expected for the flight, complies with either sub-paragraph (2) or (3) below at all points along the route.

(2) When it is intended that the flight will be conducted at any time out of sight of the surface, the mass of the helicopter permits a rate of climb of at least 50 ft/minute with the critical power unit inoperative at an altitude of at least 300 m (1000 ft) 600 m (2000 ft) in areas of mountainous terrain] above all obstacles along the route within 18.5 km (10 nm) on either side of the intended track. When it is intended that the flight will be conducted in VMC and in sight of the surface, the same requirement applies except that only obstacles within 900 m on either side of the route need be considered.

(3) The flight path permits the helicopter to continue flight from the cruising altitude to a height of 300 m (1000 ft) above the heliport where a landing can be made in accordance with BCAR - OPS 3.535. The flight path clears vertically, by at least 300 m (1000 ft) 600 m (2000 ft) in areas of mountainous terrain] all obstacles along the route within 18.5 km (10 nm) on either side of the intended track. The critical power unit is assumed to fail at the most critical point along the route. When it is intended that the flight will be conducted in VMC and in sight of the surface, the same requirement applies except that only obstacles within 900 m on either side of the route need be considered. Drift-down techniques may be used.

(4) Account is taken of the effects of winds on the flight path.

(5) Fuel jettisoning is planned to take place only to an extent consistent with reaching the heliport with the required fuel reserves and using a safe procedure.

(6) Fuel jettisoning is not planned below 1000 ft above terrain.

(b) When showing compliance with this paragraph, the width margins of sub-paragraphs (a)(2) and (a)(3) above may be reduced to 9.3 km (5 nm) if the required navigational accuracy can be achieved.

BCAR-OPS 3.535 - Landing

(a) An operator shall ensure that:

(1) The landing mass at the estimated time of landing does not exceed the maximum mass specified for a rate of climb of 150 ft/min 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.

(2) For operations without an approval to operate with an exposure time:

(i) The landing mass is such that, in the event of the critical power unit becoming inoperative at any point during the approach and landing phase, the helicopter, after clearing all obstacles under the flight path, is capable of:

(A) In the event of the critical power unit failure being recognized before the defined point before landing (DPBL), continuing the flight; and

(B) In the event of the critical power unit failure being recognized at or after the DPBL, carrying out a safe forced landing on the heliport or surface.

(3) For operations on helidecks or elevated heliports located in a non hostile environment, with an approval to operate with an exposure time (see BCAR-OPS 3.517(a)):

(i) The landing mass is such that, in the event of the critical power unit becoming inoperative at any point during the approach and landing phase up to the exposure time, the helicopter, after clearing all obstacles under the flight path, is capable of:

(A) In the event of the critical power unit failure being recognized before the defined point before landing (DPBL), continuing the flight; and

(B) In the event of the critical power unit failure being recognized between the DPBL and the start of the exposure time, carrying out a safe forced landing on the heliport or surface.

(ii) If the critical power unit failure occurs during the exposure time a safe force landing may not be possible.

(4) For operations on helidecks or elevated heliports located in a non congested hostile environment, with an approval to operate with an exposure time (see BCAR-OPS 3.517(a)):

(i) The landing mass is such that, in the event of the critical power unit becoming inoperative at any point during the approach and landing phase up to the beginning of the exposure time, the helicopter, after clearing all obstacles under the flight path, is capable of continuing the flight.

(ii) If the critical power unit failure occurs during the exposure time a safe force landing may not be possible.

(b) When showing compliance with sub-paragraph (a) above, account shall be taken of the following parameters at the estimated time of landing at the destination heliport or any alternate, if required:

(1) The pressure altitude;

(2) The ambient air temperature;

(3) The landing procedure to be used;

(4) Not more than 50% of the expected head-wind component; and

(5) Any expected variation in the mass of the helicopter during flight.

(c) That part of the landing from the DPBL to touchdown shall be conducted in sight of the surface.

Appendix 1 to BCAR-OPS 3.517(a) - Helicopter operations with an exposure time during take-off or landing.

(a) Approval:

(1) An operator may be authorized to conduct operations with an exposure time during take-off or landing, under an approval specifying:

(i) The type of helicopter; and

(ii) The type of operations.

(2) Such an approval will be subject to the following conditions:

(i) A power plant system reliability assessment conducted by the manufacturer to demonstrate an eligibility of the helicopter type (airframe/engine combination);

(ii) A set of conditions to be implemented by the operator to obtain and maintain the approval for the helicopter type;

(iii) Continuing surveillance;

(iv) Propulsion system monitoring; and

(v) Implementation of a Usage Monitoring System. These conditions are detailed in sub-paragraph (b) below.

(b) An operator conducting operations with an exposure time during take-off or landing shall implement the following:

(1) Power plant System Reliability Assessment

(i) The operator shall provide data acceptable to the Department of Civil Aviation showing:

(A) Power unit failure statistics on the helicopter type and engine type;

(B) An evaluation (by analysis) of the exposure time for the recommended take-off and landing procedures.

(ii) The data shall demonstrate the eligibility of the helicopter type by establishing that the probability of a power unit failure during the exposure time is not greater than the probability defined in AMC to Appendix 1 to BCAR-OPS 3.517(a).

(iii) New helicopter/engine combinations will be assessed on a case-by-case basis.

(2) The operator shall implement the following conditions:
(i) Attain and then maintain the helicopter/engine standard defined by the manufacturer, by applying all safety related modifications;

(ii) Conduct the preventive maintenance actions defined by the manufacturer (see paragraph (5)(v) below);

(iii) Include take-off and landing procedures in the operations manual, consistent with the exposure time, where they do not already exist in the Helicopter Flight Manual. These procedures must be based on the manufacturer's recommended procedures where they exist. For helicopter types no longer supported by the manufacturer in this respect, the specific take-off and landing procedures may be established by the operator, provided they are acceptable to the Department of Civil Aviation;

(iv) Establish training for flight crew which shall include the discussion, demonstration, use and practice of the techniques necessary to minimize the exposure time;

(v) Report the flight hours/engine hours accomplished; and

(vi) Report any power lost, engine shutdown (precautionary or otherwise) or power unit failure for any cause (excluding simulation of power unit failure during training). The content of each report shall provide:

(A) Date;

(B) Operator;

(C) Type of helicopter and type of operations:

(D) Registration and serial number of airframe:

(E) Engine type and serial number;

(F) Power unit configuration and modification history;
(G) Engine position;

(H) Symptoms leading up to the event, phase of flight or ground operations;

(I) Consequences of the event;

(J) Weather/environmental conditions;

(K) Reason for power point unit failure;

(L) Circumstances of power unit failure;

(M) In case of an In Flight Shut Down (IFSD), nature of the IFSD (Demanded/Undemanded);

(N) Procedure applied and any comment regarding engine restart potential;

(O) Engine hours and cycles;

(P) Airframe flight hours;

(Q) Comments on the incident; and

(R) Any other relevant information

(3) Continuing Surveillance

(i) In consultation with the Department of Civil Aviation and the manufacturer of his helicopter, the operator shall monitor the incidence of power unit failure so as to ensure continued power plant system reliability. In this consultation process, all aspects of the operations with exposure time shall be reviewed to ensure that the levels of reliability, achieved in operations with exposure time, remain at the necessary levels and that the operation continues to be conducted safely. The monitoring process undertaken by the three parties shall take into account the worldwide experience as well as the operator's own experience.

(ii) In the event that:

(A) An acceptable level of reliability is not maintained; or

(B) If significant adverse trends exist; or

(C) If significant deficiencies are detected in the type design; or

(D) If significant deficiencies are detected in the conduct of operations, a special evaluation shall be initiated in order to resolve the problems in a timely manner.

(4) Propulsion System Monitoring

(i) The operator's assessment of power plant system reliability for the helicopter flees shall be made available to the Department of Civil Aviation (with the supporting data) on a yearly basis, to ensure that the approved maintenance program continues to maintain a level of reliability necessary for operations with exposure time.

(ii) The assessment shall include, as a minimum, engine hours flown in the period, power unit failure rate, both on a 12 month moving average basis.

(iii) Where the helicopter fleet intended for operations with exposure time is part of a larger fleet of the same helicopter/engine combination, data from the operator's total fleet will be acceptable. However, the reporting requirements of paragraph (2)(vi) above shall still be observed for the relevant fleet.

(iv) Any adverse sustained trend will require

an immediate evaluation to be accomplished by the operator in consultation with the Department of Civil Aviation. The evaluation may result in corrective action or operational restrictions being applied.
(v) Where statistical assessment alone may not be applicable, e.g. when the fleet size is small, the operator's performance will be reviewed on a case-by-case basis.

(5) Usage Monitoring System
(i) The usage monitoring system shall fulfill at least the following:

(A) Recording of the following data:

(A1) Date and time of recording, or reliable means of establishing these parameters;

(A2) Amount of flight hours recorded during the day plus total flight time;

(A3) N1 (gas producer RPM) cycle count (if the engine features a free turbine);

(A4) N2 (power turbine RPM) cycle count;

(A5) T4 or T5 (turbine outlet temperature) exceedance: value, duration;

(A6) Power-shaft torque exceedance: value, duration (if a torque sensor is fitted);

(A7) N1 (gas producer RPM) exceedance: value, duration (if the engine features a free turbine);

(A8) N2 (power turbine RPM) exceedance (or equivalent information): value, duration;

(B) Data storage of the above parameters, if applicable, covering the maximum flight time in a day, and not less than 5 flight hours, with a sampling interval in seconds for each parameter.

(C) The recorder shall include a comprehensive serf-test function with a malfunction indicator and a detection of power-off or sensor input disconnection.

(D) Hardware and software shall be available for downloading and analysis of the recorded parameters.

(ii) The analysis of parameters gathered by the usage monitoring system and subsequent maintenance actions shall be described in the maintenance documentation.

(iii) An inspection of the engine(s) in accordance with the manufacturers' specification shall be conducted prior to the initial installation of the usage monitoring system if the engine(s) concerned has logged operating time since new/overhaul.

(iv) If the helicopter has been used for any purpose not making use of the usage monitoring system, then an inspection of the engine in accordance with the manufacturers' specification shall be undertaken prior to commencement of operations with an exposure time during take-off or landing.

(v) Engine preventive maintenance actions recommended by the manufacturer shall be systematically conducted as follows:

(A) Engine oil spectrometric analysis;

(B) Engine trend monitoring, including available power assurance checks;

(C) Engine vibration analysis;

(D) The operator shall achieve and maintain the standard defined by the manufacturer by applying all relevant modifications.
(vi) Any helicopter may be dispatched with the usage monitoring system required by this section inoperative provided that:

(A) It is not reasonably practical to repair or replace the usage monitoring system before the commencement of the flight:

(B) The helicopter does not exceed 8 further

consecutive flights with the usage monitoring system unserviceable; and

(C) Not more than 72 hours have elapsed since the usage monitoring system was found to be unserviceable.

(vii) The results of the analysis of the parameters shall be stored in an acceptable form and accessible to the Department of Civil Aviation, for at least 12 months.

SUBPART - I PERFORMANCE CLASS 3

BCAR-OPS 3.540 - General

(a) An operator shall ensure that:

(1) Helicopters operated in Performance Class 3 are certificated in either Category A or B.

(2) Operations are only conducted from/to those heliports and over such routes, areas and diversions contained in a non-hostile environment, except that:

(i) Operations may be conducted on a flight over water in a hostile environment beyond safe forced landing distance from land for not more than 10 minutes in any one flight; or

(ii) Operations may be conducted in a hostile environment when approved under BCAR-OPS 3.005(e).

(3) Operations are not conducted when the ceiling is less than 600 ft above the local surface or the visibility is less than 800 m and are always conducted in sight of the surface.

(4) Operations to/from elevated heliports in a non-hostile environment may be conducted with an exposure time to a power unit failure during take-off or landing until 31 December 2009, provided the operator has been granted a relevant approval by the Department of Civil Aviation (See Appendix 1 to BCAR-OPS 3.517(a).)

(5) Operations are not conducted from/to helidecks.

(6) Operations are not conducted at night.

BCAR-OPS 3.545 - Take-off

An operator shall ensure that:

(a) The take-off mass does not exceed the maximum take-off mass specified for a hover in ground effect with all power units operating at take-off power. If conditions are such that a hover in ground effect is not likely to be established, the take-off mass shall not exceed the maximum take-off mass specified for a hover out of ground effect with all power units operating at take-off power.

(b) When showing compliance with subparagraph (a) above, account is taken of the following parameters at the heliport of departure:

(1) The pressure altitude:

(2) The ambient temperature:

(c) In the event of a power unit failure, the helicopter is able to perform a safe forced landing, except when operated in accordance with the alleviation contained in sub-paragraph 3.540(a)(4) above or when operated in accordance with sub-paragraph 3.540(a)(2)(ii) above.

BCAR-OPS 3.550 - En-route

An operator shall ensure that:

(a) The helicopter is able, with all power units operating within the maximum continuous power conditions specified, to continue along its intended route or to a planned diversion without flying at any point below the appropriate minimum flight altitude; and

(b) in the event of a power unit failure, the helicopter is able to perform a safe forced landing except when operated in accordance with sub-paragraph 3.540(a)(2)(i) or sub-paragraph 3.540(a)(2)(ii) above.

BCAR-OPS 3.555 - Landing

An operator shall ensure that:

(a) The landing mass of the helicopter at the estimated time of landing does not exceed the maximum landing mass specified for a hover in ground effect, with all power units operating at take-off power. If conditions are such that a hover in ground effect is not likely to be established, the landing mass shall not exceed the maximum landing mass specified for a hover out of ground effect with all power units operating at take-off power.

(b) When showing compliance with subparagraph (a) above, account is taken of the following parameters at the estimated time of landing at the destination heliport or any alternate, if required:
(1) The pressure altitude;

(2) The ambient temperature;

(c) in the event of a power unit failure, the helicopter is able to perform a safe forced landing, except when operated in accordance with the alleviation contained in sub-paragraph 3.540(a)(4) above or when operated in accordance with sub-paragraph 3.540(a)(2)(ii) above.

SUBPART - J WEIGHT AND BALANCE

BCAR-OPS 3.605 - General

(See Appendix 1 to BCAR-OPS 3.605)

(a) An operator shall ensure that during any phase of operation, the loading, mass and center 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 center of gravity of any helicopter by actual weighing prior to initial entry into service and thereafter at intervals of 4 years. 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 center 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 BCAR-OPS 3.620.

(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.

BCAR-OPS 3.607 - 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 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 nonrevenue 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.

BCAR-OPS 3.610 - 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 BCAR-OPS 3.605. This system must cover all types of intended operations.

BCAR-OPS 3.615 - 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 crew members and; or

(3) Other standard masses acceptable to the Department of Civil Aviation.

(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.

BCAR-OPS 3.620 - 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 to 3 below except where the number of passenger seats available is less than 6. In the case of such exceptions, passenger mass may be established by use of a verbal statement by, or on behalf of, each passenger and adding to it a pre-determined 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, 2 and 3 below which include the mass of any infant below 2 years of age carried by an adult on one passenger seat, must be used. Infants occupying separate passenger seats must be considered as children for the purpose of this sub-paragraph.

(d) Where the total number of passenger seats available on a 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

Number of passenger seats	20 or more Male	Female	30 or more Both
All flights	82 kg	64 kg	78 kg
Children	35 kg	35 kg	35 kg
Hand baggage (Where applicable)	6 kg		
Survival suit (Where applicable)	3 kg		

(e) Where the total number of passenger seats available on a helicopter is 10 - 19 inclusive the standard masses in Table 2 are applicable.

Table 2

Passenger seats	10 – 19 Male	Female
All flights	86 kg	68 kg
Children	35 kg	35 kg
Hand baggage (Where applicable)	6 kg	
Survival suit (Where applicable)	3 kg	

(f) Where the number of passenger seats available is 1 - 5 inclusive or 6 - 9 inclusive, the standard masses in Table 3 are applicable.

Table 3

Passenger seats	1 – 5	6 – 9
Male	98 kg	90 kg
Female	80 kg	72 kg
Children	35 kg	35 kg
Hand baggage (Where applicable)	6 kg	
Survival suit (Where applicable)	3 kg	

(g) Where the total number of passenger seats available on the helicopter is 20 or more the standard mass value for each piece of checked baggage is 13 kg. For helicopters with 19 passenger seats or less the actual mass of checked baggage, determined by weighing, must be used.

(h) If an operator wishes to use standard mass values other than those contained in Tables 1 to 3 above, he must advise the Department of Civil Aviation of his reasons and gain its approval in advance. He must also submit for approval a detailed weighing survey plan and apply the statistical analysis method given in Appendix 1 to BCAR-OPS 3.620(h). After verification and approval by the Department of Civil Aviation of the results of the weighing survey, the revised standard mass values are only applicable to that operator. The revised standard mass values can only be used in circumstances consistent with those under which the survey was conducted. Where revised standard masses exceed those in Tables 3, then such higher values must be used.

(i) 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.

(j) 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.

(k) An operator shall ensure that a commander 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.

BCAR-OPS 3.625 - Mass and balance documentation

(See Appendix 1 to BCAR-OPS 3.625)

(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 [commander 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 commander, his acceptance being indicated by countersignature or equivalent. (See also BCAR-OPS 3.1055(a)(12).)

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

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

Appendix 1 to BCAR-OPS 3.605 - Mass and Balance - General

(See BCAR-OPS 3.605)

(a) Determination of the dry operating mass of a helicopter

(1) Weighing of a helicopter

(i) New helicopters are normally weighed at the factory and are eligible to be placed into operation without reweighing if the mass and balance records have been adjusted for alterations or modifications to the helicopter. Helicopters transferred from one ICAO State

operator with an approved mass control program to another ICAO State operator with an approved program need not be weighed prior to use by the receiving operator unless more than 3 years have elapsed since the last weighing.

(ii) The individual mass and center of gravity (CG) position of each helicopter shall be re-established periodically. The maximum interval between two weightings must be defined by the operator and must meet the requirements of BCAR-OPS 3.605(b). In addition, the mass and the CG of each helicopter shall be re-established either by:
(A) Weighing; or

(B) Calculation, if the operator is able to provide the necessary justification to prove the validity of the method of calculation chosen, whenever the cumulative changes to the dry operating mass exceed ± 0.5% of the maximum landing mass.

(2) Weighing procedure

(i) The weighing must be accomplished either by the manufacturer or by an approved maintenance organization.

(ii) Normal precautions must be taken consistent with good practices such as:

(A) Checking for completeness of the helicopter and equipment;

(B) Determining that fluids are properly accounted for;

(C) Ensuring that the helicopter is clean and

(D) Ensuring that weighing is accomplished in an enclosed building.

(iii) Any equipment used for weighing must be properly calibrated, zeroed, and used in accordance with the manufacturer's instructions. Each scale must be calibrated either by the manufacturer, by a civil department of weights and measures or by an appropriately authorized organization within 2 years or within a time period defined by the manufacturer of the weighing equipment, whichever is less. The equipment must enable the mass of the helicopter to be established accurately.

(b) Special standard masses for the traffic load. In addition to standard masses for passengers and checked baggage, an operator can submit for approval to the Department of Civil standard masses for other load items.

(c) Helicopter loading

(1) An operator must ensure that the loading of its helicopters is performed under the supervision of qualified personnel.

(2) An operator must ensure that the loading of the freight is consistent with the data used for the calculation of the helicopter mass and balance.

(3) An operator must comply with additional structural limits such as the floor strength limitations, the maximum load per running meter, the maximum mass per cargo compartment, and/or the maximum seating limits.

(4) The operator must take account of in-flight changes in loading (e.g. CAT hoist operations).

(d) Center of gravity limits

(1) Operational CG envelope. Unless seat allocation is applied and the effects of the number of passengers per seat row, of cargo in individual cargo compartments and of fuel in individual tanks is accounted for accurately in the balance calculation, operational margins must be applied to the certificated center of gravity envelope. In determining the CG margins, possible deviations from the assumed load distribution must be considered. If free seating is applied, the operator must

introduce procedures to ensure corrective action by flight or cabin crew if extreme longitudinal seat selection occurs. The CG margins and associated operational procedures, including assumptions with regard to passenger seating, must be acceptable to the Department of Civil Aviation

(2) In-flight center of gravity. Further to sub-paragraph (d)(1) above, the operator must show that the procedures fully account for the extreme variation in CG travel during flight caused by passenger/crew movement and fuel consumption/transfer.

Appendix 1 to BCAR-OPS 3.620(h) - Procedure for establishing revised standard mass values for passengers and baggage

(a) Passengers

(1) Weight sampling method. The average mass of passengers and their hand baggage must be determined by weighing, taking random samples. The selection of random samples must by nature and extent be representative of the passenger volume, considering the type of operation, the frequency of flights on various routes, in/outbound flights, applicable season and seat capacity of the helicopter.

(2) Sample size. The survey plan must cover the weighing of at least the greatest of:

(i) A number of passengers calculated from a pilot sample, using normal statistical procedures and based on a relative confidence range (accuracy) of 1% for all adult and 2% for separate male and female average masses; and

(ii) For helicopters:

(A) With a passenger seating capacity of 40 or more, a total of 2000 passengers; or

(B) With a passenger seating capacity of less than 40, a total number of 50 x (the passenger seating capacity).
(3) Passenger masses. Passenger masses must include the mass of the passengers' belongings, which are carried when entering the helicopter. When taking random samples of passenger masses, infants shall be weighed together with the accompanying adult (See also BCAR-OPS 3.607(d) and BCAR-OPS 3.620(c), (d) and (e)).

(4) Weighing location. The location for the weighing of passengers shall be selected as close as possible to the helicopter, at a point where a change in the passenger mass by disposing of or by acquiring more personal belongings is unlikely to occur before the passengers board the helicopter.

(5) Weighing machine. The weighing machine to be used for passenger weighing shall have a capacity of at least 150 kg. The mass shall be displayed at minimum graduations of 500 g. The weighing machine must be accurate to within 0.5% or 200 g whichever is the greater.

(6) Recording of mass values. For each flight the mass of the passengers, the corresponding passenger category (i.e. male/female/children) and the flight number must be recorded.

(b) Checked baggage. The statistical procedure for determining revised standard baggage mass values based on average baggage masses of the minimum required sample size is basically the same as for passengers and as specified in sub-paragraph (a)(1). For baggage, the relative confidence range (accuracy) amounts to 1%. A minimum of 2000 pieces of checked baggage must be weighed.

(c) Determination of revised standard mass values for passengers and checked baggage

(1) To ensure that, in preference to the use of actual masses determined by weighing, the use of revised standard mass values for

passengers and checked baggage does not adversely affect operational safety, a statistical analysis must be carried out. Such an analysis will generate average mass values for passengers and baggage as well as other data.

(2) On helicopters with 20 or more passenger seats, these averages apply as revised standard male and female mass values.

(3) On smaller helicopters, the following increments must be added to the average passenger mass to obtain the revised standard mass values:

Number if passenger seats	Required mass increment
1 – 5 inclusive	16 kg
6 – 9 inclusive	8 kg
10 – 19 inclusive	4 kg

Alternatively, all adult revised standard (average) mass values may be applied on helicopters with 30 or more passenger seats. Revised standard (average) checked baggage mass values are applicable to helicopters with 20 or more passenger seats.

(4) Operators have the option to submit a detailed survey plan to the Department of Civil Aviation for approval and subsequently a deviation from the revised standard mass value provided this deviating value is determined by use of the procedure explained in this Appendix. Such deviations must be reviewed at intervals not exceeding 5 years.
(5) All adult revised standard mass values must be based on a male/female ratio of 80/20 in respect of all flights. If an operator wishes to obtain approval for use of a different ratio on specific routes or flights then data must be submitted to the Department of Civil Aviation showing that the alternative male/female ratio is conservative and covers at least 84% of the actual male/female ratios on a sample of at least 100 representative flights.

(6) The average mass values found are rounded to the nearest whole number in kg. Checked baggage mass values are rounded to the nearest 0,5 kg figure, as appropriate.

Appendix 1 to BCAR-OPS 3.625 - Mass and Balance Documentation

(a) Mass and balance documentation

(1) Contents

(i) The mass and balance documentation must contain the following information:

(A) The helicopter registration and type;

(B) The flight identification number and date;

(C) The identity of the Commander;

(D) The identity of the person who prepared the document;

(E) The dry operating mass and the corresponding CG of the helicopter;

(F) The mass of the fuel at take-off and the mass of trip fuel;

(G) The mass of consumables other than fuel;

(H) The components of the load including passengers, baggage, freight and ballast;

(i) The Take-off Mass, Landing Mass and Zero Fuel Mass;

(J) The load distribution;

(K) The applicable helicopter CG positions; and

(L) The limiting mass and CG values.

(ii) Subject to the approval of the Department of Civil Aviation, an operator may omit some of this Data from the mass and balance documentation.

(2) Last Minute Change. If any last minute change occurs after the completion of the mass and balance documentation, this must be brought to the attention of the commander and the last minute change must be entered on the mass and balance documentation. The maximum allowed change in the number of passengers or hold load acceptable, as a last minute change must be specified in the Operations Manual. If this number is exceeded, new mass and balance documentation must be prepared.

(b) Computerized systems. Where mass and balance documentation is generated by a computerized mass and balance system, the operator must verify the integrity of the output data. He must establish a system to check that amendments of his input data are incorporated properly in the system and that

the system is operating correctly on a continuous basis by verifying the output data at intervals not exceeding 6 months.

(c) On-board mass and balance systems. An operator must obtain the approval of the Department of Civil Aviation if he wishes to use an on-board mass and balance computer system as a primary source for dispatch.

(d) Data link. When mass and balance documentation is sent to helicopters via data link, a copy of the final mass and balance documentation as accepted by the commander must be available on the ground.

SUBPART - K INSTRUMENTS AND EQUIPMENT

BCAR-OPS 3.630 - General introduction

(a) An operator shall ensure that a flight does not commence unless the instruments and equipment required under this Subpart are:

(1) Approved, except as specified in sub-paragraph (c), and installed in accordance with the requirements applicable to them, including the minimum performance standard and the operational and airworthiness requirements; and

(2) In operable condition for the kind of operation being conducted except as provided in the MEL (BCAR-OPS 3.030 refers).

(b) Instruments and equipment minimum performance standards are those prescribed in the applicable Joint Technical Standard Orders (JTSO) from the State of Manufacture, unless different performance standards are prescribed in the operational or airworthiness codes. Instruments and equipment complying with design and performance specifications other than JTSO on the date of BCAR-OPS implementation may remain in service, or be installed, unless additional requirements are prescribed in this Subpart. Instruments and equipment that have already been approved do not need to comply with a revised JTSO or a revised specification, other than JTSO, unless a retroactive requirement is prescribed.

(c) The following items shall not be required to have an equipment approval:

(1) Electric torches referred to in BCAR-OPS 3.640(a)(4);

(2) An accurate time piece referred to in BCAR-OPS 3.650(b) & 3.652(b);

(3) Chart holder referred to in BCAR-OPS 3.652(n).

(4) First aid kits referred to in BCAR-OPS 3.745;
(5) Megaphones referred to in BCAR-OPS 3.810;

(6) Survival and pyrotechnic signaling equipment referred to in BCAR-OPS 3.835(a) and (c); and

(7) Sea anchors and equipment for mooring, anchoring or maneuvering amphibians on water referred to in BCAR-OPS 3.840.

(d) If equipment is to be used by one flight crew member at his station during flight, it must be readily operable from his station. When a single item of equipment is required to be operated by more than one flight crew member it must be installed so that the equipment is readily operable from any station at which the equipment is required to be operated.

(e) Those instruments that are used by any one flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his station, with the minimum practicable deviation from the

position and line of vision which he normally assumes when looking forward along the flight path. Whenever a single instrument is required in a helicopter operated by more than one flight crew member it must be installed so that the instrument is visible from each applicable flight crew station.

BCAR-OPS 3.635

Intentionally left blank

BCAR-OPS 3.640 - Helicopter operating lights

An operator shall not operate a helicopter unless it is equipped with:

(a) For flight by day:

(1) Anti-collision light system;

(2) Lighting supplied from the helicopter's electrical system to provide adequate illumination for all instruments and equipment essential to the safe operation of the helicopter;

(3) Lighting supplied from the helicopter's electrical system to provide illumination in all passenger compartments; and

(4) An electric torch for each required crew member readily accessible to crew members when seated at their designated station.

(b) For flight by night, in addition to equipment specified in paragraph (a) above:

(1) Navigation/position lights; and

(2) Two landing lights of which at least one is adjustable in flight so as to illuminate the ground in front of and below the helicopter and the ground on either side of the helicopter; and

(3) Lights to conform with the international regulations for preventing collisions at sea if the helicopter is amphibious.

BCAR-OPS 3.645

Intentionally left blank

BCAR-OPS 3.647 - Equipment for operations requiring a radio communication and/or radio navigation system.

Whenever a radio communication and/or radio navigation system is required, an operator shall not conduct operations unless the helicopter is equipped with a headset with boom microphone or equivalent and a transmit button on the flight controls for each required pilot and/or crew member at his working station.

BCAR-OPS 3.650 - Day VFR operations.

Flight and navigational instruments and associated equipment

An operator shall not operate a helicopter by day in accordance with Visual Flight Rules (VFR) unless it is equipped with the flight and navigational instruments and associated equipment and, where applicable, under the conditions stated in the following sub-paragraphs:

(a) A magnetic compass;

(b) An accurate time-piece showing the time in hours, minutes, and seconds;

(c) A sensitive pressure altimeter calibrated in feet with a sub-scale setting, calibrated in hectopascals/millibars, adjustable for any barometric pressure likely to be set during flight;

(d) An airspeed indicator calibrated in knots;

(e) A vertical speed indicator;

(f) A slip indicator;

(g) A means of indicating in the flight crew compartment the outside air temperature

calibrated in degrees Celsius.

(h) Whenever two pilots are required the second pilot's station shall have separate instruments as follows:
(1) A sensitive pressure altimeter calibrated in feet with a sub-scale setting calibrated in hectopascals/millibars, adjustable for any barometric pressure likely to be set during flight;

(2) An airspeed indicator calibrated in knots;

(3) A vertical speed indicator; and

(4) A slip indicator.

(i) In addition to the flight and navigational equipment required by sub-paragraphs (a) to (h) above, helicopters with a maximum certified takeoff mass authorized over 2730 kg or any helicopter when operating over water out of sight of land or when the visibility is less than 1500 m must be equipped with the following flight instruments:

(1) An attitude indicator; and
(2) A stabilized direction indicator.

(j) Whenever duplicate instruments are required, the requirement embraces separate displays for each pilot and separate selectors or other associated equipment where appropriate;

(k) All helicopters must be equipped with means for indicating when power is not adequately supplied to the required flight instruments; and

(l) Each airspeed indicating system must be equipped with a heated pitot tube or equivalent means for preventing malfunction due to either condensation or icing for helicopters with a maximum certificated take-off mass in excess of 2730 kg or having a maximum approved passenger seating configuration of more than 9.

BCAR-OPS 3.652 - IFR or night operations

Flight and navigational instruments and associated equipment

An operator shall not operate a helicopter in accordance with Instrument Flight Rules (IFR) or by night in accordance with Visual Flight Rules (VFR) unless it is equipped with the flight and navigational instruments and associated equipment and, where applicable, under the conditions stated in the following sub-paragraphs:

(a) A magnetic compass;

(b) An accurate time-piece showing the time in hours, minutes and seconds;

(c) Two sensitive pressure altimeters calibrated in feet with sub-scale settings, calibrated in hectopascals/millibars, adjustable for any barometric pressure likely to be set during flight;

(d) An airspeed indicating system with heated pitot tube or equivalent means for preventing malfunctioning due to either condensation or icing including a warning indication of pitot heater failure. The pitot heater failure warning indication requirement does not apply to those helicopters with a maximum approved passenger seating configuration of 9 or less or a maximum certificated take-off mass (MCTOM) of 2730 kg or less and issued with an individual Certificate of Airworthiness prior to 1 August 1999.

(e) A vertical speed indicator;

(f) A slip indicator;

(g) An attitude indicator;

(h) A single standby attitude indicator (artificial horizon capable of being used from either pilot's station that:

(1) Provides reliable operation for a

minimum of 30 minutes or the time required to fly to a suitable alternate landing site when operating over hostile terrain or offshore, whichever is the greater, after total failure of the normal electrical generating system, taking into account other loads on the emergency power supply and operational procedures;

(2) Operates independently of any other attitude indicating system;

(3) Is operative automatically after total failure of the normal electrical generating system; and

(4) Is appropriately illuminated during all phases of operation;

(i) In complying with sub-paragraph (h) above, it must be clearly evident to the flight crew when the standby attitude indicator, required by that paragraph, is being operated by emergency power. Where the standby attitude indicator has its own dedicated power supply there shall be an associated indication clearly visible when this supply is in use.

(j) A stabilized direction indicator;

(k) A means of indicating in the flight crew compartment the outside air temperature calibrated in degrees Celsius; and

(l) An alternate source of static pressure for the altimeter and the airspeed and vertical speed indicators; and

(m) Whenever two pilots are required the second pilot's station shall have separate instruments as follows:

(1) A sensitive pressure altimeter calibrated in feet with a sub-scale setting, calibrated in hectopascals/millibars, adjustable for any barometric pressure setting likely to be encountered during flight which may be one of the two altimeters required by sub-paragraph (c) above;

(2) An airspeed indicating system with heated pitot tube or equivalent means for preventing malfunctioning due to either condensation or icing including a warning indication of pitot heater failure. The pitot heater failure warning indication requirement does not apply to those helicopters with a maximum approved passenger seating configuration of 9 or less or a MCTOM of 2730 kg or less and issued with an individual Certificate of Airworthiness prior to 1 August 1999;

(3) A vertical speed indicator;

(4) A slip indicator;

(5) An attitude indicator; and

(6) A stabilized direction indicator.

(n) A chart holder in an easily readable position, which can be illuminated for night operations.

(o) Whenever duplicate instruments are required, the requirement embraces separate displays for each pilot and separate selectors or other associated equipment where appropriate; and
(p) All helicopters must be equipped with means for indicating when power is not adequately supplied to the required flight instruments.

BCAR-OPS 3.655 - Additional equipment for single pilot operation under IFR

An operator shall not conduct single pilot IFR operations unless the helicopter is equipped with an autopilot with, at least, altitude hold and heading mode.

BCAR-OPS 3.660 - Radio Altimeters

An operator shall not operate a helicopter on a flight over water at a distance from land corresponding to more than 10 minutes at normal cruise speed unless that helicopter is

equipped with a radio altimeter with an audio voice warning, or other means acceptable to the Department of Civil Aviation, operating below a preset height and a visual warning capable of operating at a height selectable by the pilot.

BCAR-OPS 3.665

Intentionally left blank

BCAR-OPS 3.670 - Airborne Weather Radar Equipment

An operator shall not operate a helicopter with a maximum approved passenger seating configuration of more than 9 under IFR or at night when current weather reports indicate that thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather radar, may reasonably be expected along the route to be flown unless it is equipped with airborne weather radar equipment.

BCAR-OPS 3.675 - Equipment for operations in icing conditions

(a) An operator shall not operate a helicopter in expected or actual icing conditions unless it is certificated and equipped to operate in icing conditions.

(b) An operator shall not operate a helicopter in expected or actual icing conditions at night unless it is equipped with a means to illuminate or detect the formation of ice. Any illumination that is used must be of a type that will not cause glare or reflection that would handicap crew members in the performance of their duties.

BCAR-OPS 3.680 Intentionally left blank

BCAR-OPS 3.685 - Flight crew interphone system.

An operator shall not operate a helicopter on which a flight crew of more than one is required unless it is equipped with a flight crew interphone system, including headsets and microphones, not of a handheld type, for use by all members of the flight crew.

BCAR-OPS 3.690 - Crew member interphone system

(a) An operator shall not operate a helicopter carrying a crew member other than a flight crew member unless it is equipped with a crew member interphone system.

(b) The crew member interphone system required by this paragraph must:

(1) Operate independently of the public address system except for handsets, headsets, microphones, selector switches and signaling devices;

(2) Provide a means of two-way communication between the flight crew compartment and each passenger compartment;

(3) Be readily accessible for use from each of the required flight crew stations in the flight crew compartment;

(4) Be readily accessible for use at required cabin crew stations close to each separate or pair of floor level emergency exits;

(5) Have an alerting system incorporating aural or visual signals for use by flight crew members to alert the cabin crew and for use by cabin crew members to alert the flight crew; and

(6) Have a means for the recipient of a call to determine whether it is a normal call or an emergency call.

BCAR-OPS 3.695 - Public address system

(a) An operator shall not operate a helicopter with a maximum approved passenger seating configuration of more than 9 unless a public address system is

installed.

(b) The public address system required by this paragraph must:

(1) Operate independently of' the interphone systems except for handsets, headsets, microphones, selector switches and signalling devices;

(2) Be readily accessible for immediate use from each required flight crew member station;

(3) Be readily accessible for use from at least one cabin crew member station in the cabin, and each public address system microphone intended for cabin crew use must be positioned adjacent to a cabin crew member seat that is located near each required floor level emergency exit in the passenger compartment;
(4) Be capable of operation within ten seconds by a cabin crew member at each of those stations in the compartment from which its use is accessible;

(5) Be audible and intelligible at all passenger seats, toilets and cabin crew seats and work stations; and

(6) Following a total failure of the normal electrical generating system, provide reliable operation for a minimum of 10 minutes.

BCAR-OPS 3.700 - Cockpit voice recorders
1

(a) An operator shall not operate a helicopter first issued with an individual Certificate of Airworthiness, either in an ICAO member state or elsewhere, on or after 1 August 1999, which has a maximum certificated take-off mass over 5730 kg, unless it is equipped with a cockpit voice recorder which, with reference to a time scale, records:
(1) Voice communications transmitted from or received by the flight crew by radio;

(2) The aural environment of the cockpit including, without interruption, the audio signals received from each flight crew microphone in use;

(3) Voice communications of flight crew members on the flight deck using the helicopter's interphone system;

(4) Voice or audio signals identifying navigation or approach aids introduced into a headset or speaker; and

(5) Voice communications of flight crew members on the flight deck using the public address system, where practicable.

(b) The cockpit voice recorder shall be capable of retaining information recorded during at least the last hour of its operation except that, for those helicopters with a maximum certificated take-off mass of 7000 kg or less, this period may be reduced to 30 minutes.

(c) The cockpit voice recorder must start automatically to record prior to the helicopter moving under its own power and continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power. In addition, depending on the availability of electrical power, the cockpit voice recorder must start to record as early as possible during the cockpit checks prior to engine start at the beginning of the flight until the cockpit checks immediately following engine shutdown at the end of the flight.

(d) The cockpit voice recorder must have a device to assist in locating that recorder in water.

(e) In complying with this section, the cockpit voice recorder may be combined with the flight data recorder.

(f) Any helicopter may be dispatched with the cockpit voice recorder required by this section inoperative provided that:

(1) It is not reasonably practical to repair or replace the cockpit voice recorder before the commencement of the flight;

(2) The helicopter does not exceed 8 further consecutive flights with the cockpit voice recorder unserviceable;

(3) Not more than 72 hours have elapsed since the cockpit voice recorder was found to be unserviceable; and

(4) Any flight data recorder required to be carried is operative unless it is combined with the cockpit voice recorder.

BCAR-OPS 3.705 - Cockpit voice recorders. 2

(a) An operator shall not operate a helicopter first issued with an individual Certificate of Airworthiness, either in an ICAO member state or elsewhere, up to and including 31 July 1999 which has a maximum certificated take-off mass over 7000 kg or a maximum approved passenger seating configuration of more than 9, unless it is equipped with a cockpit voice recorder which records with reference to a time scale:

(1) Voice communications transmitted from or received by the flight crew by radio;

(2) The aural environment of the cockpit, including where practicable, without interruption, the audio signals received from each flight crew microphone in use;

(3) Voice communications of flight crew members on the flight deck using the helicopter's interphone system;

(4) Voice or audio signals identifying navigation or approach aids introduced into a headset or speaker and

(5) Voice communications of flight crew members on the flight deck using the public address system, where practicable; and

(6) For a helicopter not equipped with a flight data recorder, the parameters necessary to determine main rotor speed.

(b) The cockpit voice recorder shall be capable of retaining information recorded during at least the last 30 minutes of its operation.

(c) The cockpit voice recorder must start to record prior to the helicopter moving under its own power and continue to record until the termination of the flight when the helicopter is no longer capable of moving under its own power.
(d) The cockpit voice recorder must have a device to assist in locating that recorder in water.

(e) In complying with this section, the cockpit voice recorder may be combined with the flight data recorder.

(f) Any helicopter may be dispatched with the cockpit voice recorder required by this section inoperative provided that:

(1) It is not reasonably practical to repair or replace the cockpit voice recorder before the commencement of the flight;

(2) The helicopter does not exceed 8 further consecutive flights with the cockpit voice recorder unserviceable;

(3) Not more than 72 hours have elapsed since the cockpit voice recorder was found to be unserviceable; and

(4) Any flight data recorder required to be carried is operative unless it is combined with the cockpit voice recorder.

BCAR-OPS 3.710

Intentionally left blank

BCAR-OPS 3.715 - Flight data recorders 1

(a) An operator shall not operate any helicopter first issued with an individual Certificate of Airworthiness either in an ICAO member state or elsewhere on or after 1 August 1999 which has a maximum certificated take-off mass over 5000 kg unless it is equipped with a flight data recorder that uses a digital method of recording and storing data and a method of readily retrieving that data from the storage medium is available.

(b) The flight data recorder shall be capable of retaining the data recorded during at least the last 8 hours of its operation.
(c) The flight data recorder must, with reference to a timescale, record:

(1) The parameters necessary to determine altitude, airspeed, heading, acceleration, pitch and roll attitude, radio transmission keying, power on each engine, main rotor speed, use of rotor brakes, positions of primary flight controls, cockpit warnings, air temperature, use of automatic flight control systems and use of stability augmentation systems; and

(2) For those helicopters with a maximum certificated take-off mass over 7000 kg, the additional parameters necessary to determine main gearbox oil temperature and pressure, yaw rate, indicated sling load force if an indicator is installed, radio altitude and landing gear position.

(3) For all helicopters, the flight data recorder must record any dedicated parameters relating to novel or unique design or operational characteristics of the helicopter.

(d) Data must be obtained from aircraft sources, which enable accurate correlation with information displayed to the flight crew.

(e) The flight data recorder must start automatically to record the data prior to the helicopter being capable of moving under its own power and must stop automatically after the helicopter is incapable of moving under its own power.

(f) The flight data recorder must have a device to assist in locating that recorder in water.

(g) In complying with this section, the flight data recorder may be combined with the cockpit voice recorder.

(h) Any helicopter may be dispatched with the flight data recorder required by this section inoperative provided that:
(1) It is not reasonably practical to repair or replace the flight data recorder before the commencement of the flight;

(2) The helicopter does not exceed 8 further consecutive flights with the flight data recorder unserviceable;

(3) Not more than 72 hours have elapsed since the flight data recorder was found to be unserviceable; and

(4) Any cockpit voice recorder required to be carried is operative unless it is combined with the flight data recorder.

BCAR-OPS 3.720 - Flight data recorders - 2

(a) Reserved.

Note: This paragraph is intended to define the applicability of the flight data recorder requirement for helicopters not covered by BCAR-OPS 3.715. Until circulation of a Notice of Proposed Amendment (NPA) national regulations will continue to apply in which case the flight data recorders concerned should comply with the following.

(b) The flight data recorder shall be capable of retaining the data recorded during at least the last 5 hours of its operation.

(c) The flight data recorder must record with

reference to a timescale:

(1) The parameters necessary to determine altitude, airspeed, heading, acceleration, pitch and roll attitude, radio transmission keying, power on each engine, main rotor speed, use of rotor brakes, positions of primary flight controls, cockpit warnings, air temperature, use of automatic flight control systems and use of stability augmentation systems;

(2) For those helicopters with a maximum certificated take-off mass over 7000 kg, the additional parameters necessary to determine main gearbox oil temperature and pressure, yaw rate, indicated sling load force if an indicator is installed, radio altitude and landing gear position; and

(3) For all helicopters, the flight data recorder must record any dedicated parameters relating to novel or unique design or operational characteristics of the helicopter.

(d) Data must be obtained from aircraft sources, which enable accurate correlation with information displayed to the flight crew.

(e) The flight data recorder must start automatically to record the data prior to the helicopter being capable of moving under its own power and must stop automatically after the helicopter is incapable of moving under its own power.

(f) The flight data recorder must have a device to assist in locating that recorder in water.
(g) In complying with this section, the flight data recorder may be combined with the cockpit voice recorder.

(h) Any helicopter may be dispatched with the flight data recorder required by this section inoperative provided that:

(1) It is not reasonably practical to repair or replace the flight data recorder before the commencement of the flight;

(2) The helicopter does not exceed 8 further consecutive flights with the flight data recorder unserviceable;

(3) Not more than 72 hours have elapsed since the flight data recorder was found to be unserviceable; and

(4) Any cockpit voice recorder required to be carried is operative unless it is combined with the flight data recorder.

BCAR-OPS 3.725

Intentionally left blank

BCAR-OPS 3.730 - Seats, seat safety belts, harnesses and child restraint devices

(a) An operator shall not operate a helicopter unless it is equipped with:

(1) A seat or berth for each person who is aged two years or more;

(2) For helicopters first issued with an individual Certificate of Airworthiness, either in an ICAO member state or elsewhere, a safety belt, with or without a diagonal shoulder strap, or a safety harness for use in each passenger seat for each passenger aged two years or more;

(3) For helicopters first issued with an individual Certificate of Airworthiness, either in an ICAO member state or elsewhere, a safety belt, with a diagonal shoulder strap, or a safety harness for use in each passenger seat for each passenger aged 2 years or more;

(4) A restraint device for each passenger less than 2 years of age;

(5) A safety harness for each flight crew seat incorporating a device which will automatically restrain the occupant's torso in the event of rapid deceleration; and

(6) A safety harness for each cabin crew member's seat.

Note: This requirement does not preclude use of passenger seats by cabin crew members carried in excess of the required cabin crew complement.

(7) Seats for cabin crew members located, where possible, near a floor level emergency exit. If the number of required cabin crew members exceeds the number of floor level emergency exits the additional cabin crew seats required shall be located such that the cabin crew member(s) may best be able to assist passengers in the event of an emergency evacuation. Such seats shall be forward or rearward facing within 15° of the longitudinal axis of the helicopter.

(b) All safety harnesses and safety belts must have a single point release. A safety belt with a diagonal shoulder strap is permitted if it is not reasonably practicable to fit the latter.

BCAR-OPS 3.731 - Fasten Seat belt and No-Smoking signs

An operator shall not operate a helicopter in which all passenger seats are not visible from the commander' s seat, or from the seat of the pilot to whom the conduct of the flight may be delegated, unless it is equipped with a means of indicating to all passengers and cabin crew when seat belts shall be fastened and when smoking is not allowed.

BCAR-OPS 3.735 Intentionally left blank

BCAR-OPS 3.740 Intentionally left blank

BCAR-OPS 3.745 - First-Aid Kits

(a) An operator shall not operate a helicopter unless it is equipped with a first-aid kit, readily accessible for use.

(b) An operator shall ensure that first-aid kits are:

(1) Inspected periodically to confirm, to the extent possible, that contents are maintained in the condition necessary for their intended use; and

(2) Replenished at regular intervals, in accordance with instructions contained on their labels, or as circumstances warrant.

BCAR-OPS 3.750

Intentionally left blank

BCAR-OPS 3.755

Intentionally left blank

BCAR-OPS 3.760

Intentionally left blank

BCAR-OPS 3.765

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BCAR-OPS 3.770

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BCAR-OPS 3.775 - Supplemental oxygen Non-pressurized helicopters

(See Appendix 1 to BCAR-OPS 3.775)

(a) General

(1) An operator shall not operate a nonpressurized helicopter at pressure altitudes above 10 000 ft unless supplemental oxygen equipment, capable of storing and dispensing the oxygen supplies required, is provided.

(2) The amount of supplemental oxygen for sustenance required for a particular operation shall be determined on the basis

of flight altitudes and flight duration, consistent with the operating procedures established for each operation in the Operations Manual and with the routes to be flown, and with the emergency procedures specified in the Operations Manual.

(3) A helicopter intended to be operated above 10,000 ft pressure altitude shall be provided with equipment capable of storing and dispensing the oxygen supplies required.

(b) Oxygen supply requirements

(1) Flight crew members. Each member of the flight crew on duty in the cockpit shall be supplied with supplemental oxygen in accordance with Appendix 1. If all occupants of cockpit seats are supplied from the flight crew source of oxygen supply then they shall be considered as flight crew members on cockpit duty for the purpose of oxygen supply.

(2) Cabin crew members, additional crew members and passengers. Cabin crew members and passengers shall be supplied with oxygen in accordance with Appendix 1. Cabin crew members carried in addition to the minimum number of cabin crew members required, and additional crew members, shall be considered as passengers for the purpose of oxygen supply.

BCAR-OPS 3.780 Intentionally left blank

BCAR-OPS 3.785 Intentionally left blank

BCAR-OPS 3.790 - Hand fire extinguishers

An operator shall not operate a helicopter unless hand fire extinguishers are provided for use in crew, passenger and, as applicable, cargo compartments and galleys in accordance with the following:

(a) The type and quantity of extinguishing agent must be suitable for the kinds of fires likely to occur in the compartment where the extinguisher is intended to be used and, for personnel compartments, must minimize the hazard of toxic gas concentration;

(b) At least one hand fire extinguisher, containing Halon 1211 (bromochlorodifluoromethane, $CBrClF_2$), or equivalent as the extinguishing agent, must be conveniently located in the cockpit for use by the flight crew;

(c) At least one hand fire extinguisher must be located in, or readily accessible for use in, each galley not located on the main passenger deck;

(d) At least one readily accessible hand fire extinguisher must be available for use in each cargo compartment which is accessible to crew members during flight for the purpose of fire fighting; and

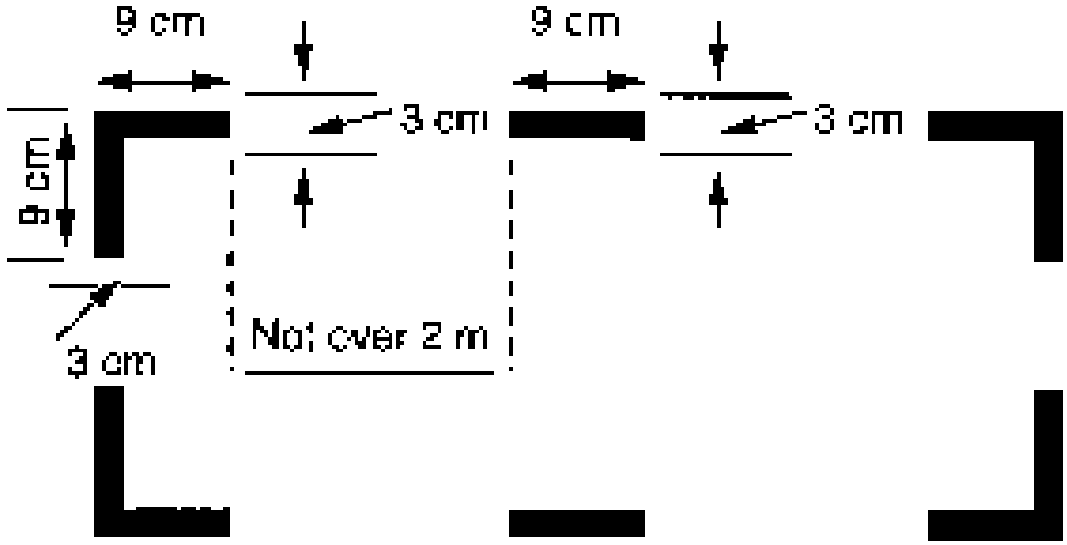
(e) There must be at least the following number of hand fire extinguishers conveniently located to provide adequate availability for use in each passenger compartment.

Passenger compartment seating capacity	Minimum number of Hand Fire Extinguishers
7 to 30	1
31 to 60	2
61 to 200	3

BCAR-OPS 3.795 Intentionally left blank

BCAR-OPS 3.800 - Marking of break-in points

An operator shall ensure that, if designated areas of the fuselage suitable for break-in by rescue crews in emergency are available on a helicopter, such areas shall be marked as shown below. The color of the markings shall be red or yellow, and if necessary they shall be outlined in white to contrast with the background. If the corner markings are more than 2 meters apart, intermediate lines 9 cm x 3 cm shall be inserted so that there is no more than 2 meters between adjacent marks.


9 cm
9 cm
3 cm
3 cm
9 cm
3 cm
Not over 2 m

BCAR-OPS 3.805

Intentionally left blank

BCAR-OPS 3.810 - Megaphones

An operator shall not operate a helicopter with a total maximum approved passenger seating configuration of more than 19 unless it is equipped with portable battery-powered megaphones readily available for use by crew members during an emergency evacuation.

BCAR-OPS 3.815 - Emergency lighting

(a) An operator shall not operate a helicopter which has a maximum approved passenger seating configuration of more than 19 unless it is equipped with:

(1) An emergency lighting system having an independent power supply to provide a source of general cabin illumination to facilitate the evacuation of the helicopter; and

(2) Illuminated emergency exit marking and locating signs.

BCAR-OPS 3.820 - Automatic Emergency Locator Transmitter

(a) An operator shall not operate a helicopter unless it is equipped with an automatic Emergency Locator Transmitter (ELT) attached to the helicopter in such a manner that, in the event of a crash, the probability of the ELT transmitting a detectable signal is maximized and the possibility of the ELT transmitting at any other time is minimized.

[(b) An operator shall not operate a helicopter in Performance Class 1 or 2 on a flight over water in a hostile environment as defined in BCAR-OPS 3.480(a)(12)(ii)(A) at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed, on a flight in support of or in connection with the offshore exploitation of mineral resources (including gas), unless it is equipped with an Automatically Deployable Emergency Locator Transmitter (ELT (AD)).

(c) An operator must ensure that the ELT is capable of transmitting on the distress frequencies prescribed in ICAO Annex 10.

BCAR-OPS 3.825 - Life Jackets

(a) An operator shall not operate a helicopter for any operations on water or on a flight over water:

(1) When operating in Performance Class 3 beyond auto rotational distance from land; or

(2) When operating in Performance Class 1 or 2 at a distance from land corresponding to more than 10 minutes flying time at normal cruise speed; or

(3) When operating in Performance Class 2 or 3 when taking off or landing at a heliport where the take-off or approach path is over water,

unless it is equipped with life jackets equipped with a survivor locator light, for each person on board, stowed in an easily accessible position, with safety belt or harness fastened, from the seat or berth of the person for whose use it is provided and an individual infant flotation device, equipped with a survivor locator light, for use by each infant on board.

BCAR-OPS 3.827 - Crew Survival Suits

(a) An operator shall not operate a helicopter in Performance Class 1 or 2 on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed from land on a flight in support of or in connection with the offshore exploitation of mineral resources (including gas) when the weather report or forecasts available to the commander indicate that the sea

temperature will be less than plus 10°C during the flight or when the estimated rescue time exceeds the calculated survival time unless each member of the crew is provided with a survival suit.

(b) An operator shall not operate a helicopter in Performance Class 3 on a flight over water in a hostile environment beyond auto rotational or safe forced landing distance from land unless each member of the crew is wearing a survival suit.

BCAR-OPS 3.830 - Life-rafts and survival ELTs or extended over water flights

(a) An operator shall not operate a helicopter on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed when operating in Performance Class 1 or 2, or 5 minutes flying time at normal cruising speed when operating in Performance Class 3 unless it carries:

(1) In the case of a helicopter carrying less than 12 persons, a minimum of one life-raft with a rated capacity of not less than the maximum number of persons on board;

(2) In the case of a helicopter carrying more than 11 persons, a minimum of two life-rafts sufficient together to accommodate all persons capable of being carried on board. Should one life-raft of the largest rated capacity be lost, the overload capacity of the remaining life-raft(s) shall be sufficient to accommodate all persons;

(3) At least one survival Emergency Locator Transmitter (ELT (S)) capable of transmitting on the distress frequencies prescribed in ICAO Annex 10;

(4) Emergency exit lighting; and

(5) Life saving equipment including means of sustaining life as appropriate to the flight to be undertaken.

BCAR-OPS 3.835 - Survival equipment

An operator shall not operate a helicopter in areas where search and rescue would be especially difficult unless it is equipped with the following:

(a) Signalling equipment to make the pyrotechnical distress signals described in ICAO Annex 2;

(b) At least one survival Emergency Locator Transmitter (ELT (S)) capable of transmitting on the distress frequencies prescribed in ICAO Annex 10; and

(c) Additional survival equipment for the route to be flown taking account of the number of persons on board.

BCAR-OPS 3.387 - Additional requirements for helicopters operating to or from helidecks located in a hostile sea area (as defined in BCAR-OPS 3.480(a)(11)(ii)(A))

(a) An operator shall not operate a helicopter on a flight to or from a helideck located in a hostile sea area at a distance from land corresponding to more than 10 minutes flying time at normal cruising speed on a flight in support of or in connection with the offshore exploitation of mineral resources (including gas) unless:

(1) When the weather report or forecasts available to the commander indicate that the sea temperature will be less than plus 10°C during the flight, or when the estimated rescue time exceeds the calculated survival time or the flight is planned to be conducted at night. All persons on board are wearing a survival suit;

(2) All life rafts carried in accordance with BCAR-OPS 3.830 are installed so as to be usable in the sea conditions in which the helicopter's ditching, flotation and trim characteristics were evaluated in order to comply with the ditching requirements for

certification;

(3) The helicopter is equipped with an emergency lighting system having an independent power supply to provide a source of general cabin illumination to facilitate the evacuation of the helicopter:

(4) All emergency exits, including crew emergency exits, and its means of opening are conspicuously marked for the guidance of occupants using the exits in daylight or in the dark. Such markings are designed to remain visible if the helicopter is capsized and the cabin is submerged;

(5) All non-jettisonable doors which are designated as Ditching Emergency Exits have a means of securing them in the open position so they do not interfere with occupants egress in all sea conditions up to the maximum required to be evaluated for ditching and flotation;

(6) All doors, windows or other openings in the passenger compartment authorized by the Department of Civil Aviation as suitable for the purpose of underwater escape, are equipped so as to be operable in an emergency:

(7) All passenger and crew lifejackets are worn constantly.

BCAR-OPS 3.840 - Helicopters certificated for operating on water - Miscellaneous equipment

(a) An operator shall not operate on water a helicopter certificated for operating on water unless it is equipped with:

(1) A sea anchor and other equipment necessary to facilitate mooring, anchoring or maneuvering the aircraft on water, appropriate to its size, weight and handling characteristics; and

(2) Equipment for making the sound signals prescribed in the International Regulations for preventing collisions at sea, where applicable.

BCAR-OPS 3.843 - All helicopters on flights over water - Ditching

(a) An operator shall not operate a helicopter in Performance Class 1 on a flight over water at a distance from land corresponding to more than 10 minutes flying time at normal cruise speed unless that helicopter is so designed for landing on water or is fitted with emergency flotation equipment.

(b) An operator shall not operate a helicopter in Performance Class 2 or 3 on a flight over water beyond safe forced landing distance from land unless that helicopter is so designed for landing on water or is fitted with emergency flotation equipment.

Appendix 1 to BCAR-OPS 3.775 Supplemental Oxygen for non-pressurized Helicopters

Table 1

(a)	(b)
SUPPLY FOR:	DURATION AND PRESSURE ALTITUDE
1. All occupants of flight seats on flight deck duty	Entire flight time at pressure altitudes above 10000 feet
2. All required cabin crew members	Entire flight time at pressure altitudes above 13000 feet and for any period exceeding 30 minutes at pressure altitudes above 10000 feet but not exceeding 13000 feet.
3. 100% of passengers (see note)	Entire flight time at pressure altitudes above 13000 feet
4. 10 % of passengers (see note)	Entire flight time after 30 minutes at pressure altitudes greater than 10000 feet but not exceeding 13000 feet

Note: For the purpose of this table 'passengers' means passengers actually carried and includes infants under the age of 2.

SUBPART - L COMMUNICATION AND NAVIGATION EQUIPMENT

BCAR-OPS 3.845 - General introduction

(a) An operator shall ensure that a flight does not commence unless the communication and navigation equipment required under this Subpart is:

(1) Approved and installed in accordance with the requirements applicable to them, including the minimum performance standard and the operational and airworthiness requirements;

(2) Installed such that the failure of any single unit required for either communication or navigation purposes, or both, will not result in the failure of another unit required for communications or navigation purposes.

(3) In operable condition for the kind of operation being conducted except as provided in the MEL (BCAR-OPS 3.030 refers); and

(4) So arranged that if equipment is to be used by one flight crew member at his station during flight it must be readily operable from his station. When a single item of equipment is required to be operated by more than one flight crew member it must be installed so that the equipment is readily operable from any station at which the equipment is required to be operated.

(b) Communication and navigation equipment minimum performance standards are those prescribed in the applicable Joint Technical Standard Orders (JTSO) as listed in BCAR-TSO, unless different performance standards are prescribed in the operational or airworthiness codes. Communication and navigation equipment complying with design and performance specifications other than JTSO on the date of BCAR-OPS implementation may remain in service, or be installed, unless additional requirements are prescribed in this Subpart. Communication and navigation equipment, which has already been approved, does not need to comply with a revised JTSO or a revised specification, other than JTSO, unless a retroactive requirement is prescribed.

BCAR-OPS 3.850 - Radio Equipment

(a) An operator shall not operate a helicopter unless it is equipped with radio required for the kind of operation being conducted.

(b) Where two independent (separate and complete) radio systems are required under this Subpart, each system must have an independent antenna installation except that, where rigidly supported non-wire antennae or other antenna installations of equivalent reliability are used, only one antenna is required.

(c) The radio communication equipment required to comply with paragraph (a) above must also provide for communications on the aeronautical emergency frequency 121.5 MHz.

BCAR-OPS 3.855 - Audio Selector Panel

An operator shall not operate a helicopter under IFR unless it is equipped with an audio selector panel accessible to each required flight crew member.

BCAR-OPS 3.860
Radio equipment for operations under VFR over routes navigated by reference to visual landmarks

An operator shall not operate a helicopter under VFR over routes that can be navigated by reference to visual landmarks, unless it is equipped with the radio

equipment (communication and SSR transponder equipment) necessary under normal operating conditions to fulfill the following:

(a) Communicate with appropriate ground stations;

(b) Communicate with appropriate air traffic control facilities from any point in controlled airspace within which flights are intended;

(c) Receive meteorological information; and

(d) Reply to SSR interrogations as required for the route being flown.

BCAR-OPS 3.865 - Communication and Navigation equipment for operations under IFR, or under VFR over routes not navigated by reference to visual landmarks

(a) An operator shall not operate a helicopter under IFR, or under VFR over routes that cannot be navigated by reference to visual landmarks, unless the helicopter is equipped with radio (communication and SSR transponder) and navigation equipment in accordance with the requirements of air traffic services in the area(s) of operation.

(b) Radio equipment. An operator shall ensure that radio equipment comprises not less than:

(1) Two independent radio communication systems necessary under normal operating conditions to communicate with an appropriate ground station from any point on the route including diversions; and
(2) SSR transponder equipment as required for the route being flown.

(c) Navigation equipment. An operator shall ensure that navigation equipment

(1) Comprises not less than:

(i) Two independent navigations aids appropriate to the route/area to be flown;

(ii) An approach aid suitable for the destination and alternate heliports;

(iii) An Area Navigation System when area navigation is required for the route/area being flown;

(iv) An additional VOR receiving system on any route, or part thereof, where navigation is based only on VOR signals; and

(v) An additional ADF system on any route, or part thereof, where navigation is based only on NDB signals, or

(2) Complies with the Required Navigation Performance (RNP) Type for operation in the airspace concerned.

(d) An operator may operate a helicopter that is not equipped with the navigation equipment specified in sub-paragraph(s) (c)(1)(iv) and/or (c)(1)(v) above, provided that it is equipped with alternative equipment authorized for the route/area being flown by the Department of Civil Aviation. The reliability and the accuracy of alternative equipment must allow safe navigation for the intended route.

(e) The above requirements may be met by combinations of instruments or by integrated flight systems or by a combination of parameters on electronic displays provided that the information so available to each required pilot is not less than that provided by the instruments and associated equipment as specified above.
(f) Where not more than one item of equipment specified in (a) above is unserviceable when the helicopter is about to begin a flight, the helicopter may nevertheless take-off on that flight if:
(1) It is not reasonably practical to repair or replace that item, before the commencement of the flight;

(2) The helicopter has not made more than

one flight since the item was found to be unserviceable; and

(3) The commander has satisfied himself that, taking into account the latest information available as to the route/area and heliport to be used (including any planned diversion) and the weather conditions likely to be encountered, the flight can be made safely and in accordance with any relevant requirements of the appropriate air traffic control limit.

BCAR-OPS 3.870 Intentionally left blank

SUBPART – M HELICOPTER MAINTENANCE

BCAR-OPS 3.875 - General

(a) An operator shall not operate a helicopter unless it is maintained and released to service by an organization appropriately approved/accepted in accordance with BCAR-145 except that pre-flight inspections need not necessarily be carried out by the BCAR-145 organization.

(b) This Subpart prescribes helicopter maintenance requirements needed to comply with the operator certification requirements in BCAR-OPS 3.180.

BCAR-OPS 3.880 - Terminology

The following definitions from BCAR-145 shall apply to this Subpart:
(a) Approved by the Department of Civil Aviation - means approved by the Department of Civil Aviation directly or in accordance with a procedure approved by the Department of Civil Aviation.

(b) Approved standard - means a manufacturing/design/maintenance/quality standard approved by the Department of Civil Aviation.

(c) Preflight inspection - means the inspection carried out before flight to ensure that the helicopter is fit for the intended flight. It does not include defect rectification.

BCAR-OPS 3.885 - Application for and approval of the operator's maintenance system

(a) For the approval of the maintenance system, an applicant for the initial issue, variation and renewal of an AOC shall submit the documents specified in BCAR-OPS 3.185(b).

(b) An applicant for the initial issue, variation and renewal of an AOC who meets the requirements of this Subpart, in conjunction with an appropriate BCAR-145 approved/accepted maintenance organization's exposition, is entitled to approval of the maintenance system by the Department of Civil Aviation.

Note: Detailed requirements are given in BCAR-OPS 3.180(a)(3) and 3.180(b), and BCAR-OPS 3.185.

BCAR-OPS 3.890 - Maintenance responsibility

(a) An operator shall ensure the airworthiness of the helicopter and the serviceability of both operational and emergency equipment by:

(1) The accomplishment of pre-flight inspections;
(2) The rectification to an approved standard of any defect and damage affecting safe operation, taking into account the minimum equipment list and configuration deviation list if available for the helicopter type;

(3) The accomplishment of all maintenance in accordance with the approved operator's helicopter maintenance program specified in BCAR-OPS 3.910;

(4) The analysis of the effectiveness of the operator's approved helicopter maintenance

program;

(5) The accomplishment of any operational directive, airworthiness directive and any other continued airworthiness requirement made mandatory by the Department of Civil Aviation. Until formal adoption of BCAR-39, the operator must comply with the current national aviation regulations; and

(6) The accomplishment of modifications in accordance with an approved standard and, for non-mandatory modifications, the establishment of an embodiment policy.

(b) An operator shall ensure that the Certificate of Airworthiness for each helicopter operated remains valid in respect of:

(1) The requirements in sub-paragraph (a) above;

(2) Any calendar expiry date specified in the Certificate; and

(3) Any other maintenance condition specified in the Certificate.

(c) The requirements specified in subparagraph (a) above must be performed in accordance with procedures acceptable to the Department of Civil Aviation.

BCAR-OPS 3.895 - Maintenance Management

(a) An operator must be appropriately approved in accordance with BCAR-145 to carry out the requirements specified in BCAR-OPS 3.890(a)(2), (3), (5) and (6) except when the Department of Civil Aviation is satisfied that the maintenance can be contracted to an appropriate BCAR-145 approved/accepted organization.

(b) An operator must employ a person or group of persons acceptable to the Department of Civil Aviation to ensure that all maintenance is carried out on time to an approved standard such that the maintenance responsibility requirements prescribed in BCAR-OPS 3.890 are satisfied and to ensure the functioning of the quality system required by BCAR-OPS 3.900. The person, or senior person as appropriate, is the nominated post holder referred to in BCAR-OPS 3.175(i)(2).

(c) When an operator is not appropriately approved in accordance with BCAR-145, arrangements must be made with such an organization to carry out the requirements specified in BCAR-OPS 3.890(a)(2), (3), (5) and (6). Except as otherwise specified in paragraphs (e), (f) and (g) below, the arrangement must be in the form of a written maintenance contract between the operator and the BCAR-145 approved/accepted maintenance organization detailing the functions specified in BCAR-OPS 3.890(a)(2), (3), (5) and (6) and defining the support of the quality functions of BCAR-OPS 3.900. Helicopter base and scheduled line maintenance and engine maintenance contract(s), together with all amendments, must be acceptable to the Department of Civil Aviation. The Department of Civil Aviation does not require the commercial elements of a maintenance contract.

(d) An operator must provide suitable office accommodation at appropriate locations for the personnel specified in sub-paragraph (b) above.

BCAR-OPS 3.900 - Quality System

(a) For maintenance purposes, the operator's quality system, as required by BCAR-OPS 3.035, must additionally include at least the following functions:

(1) Monitoring that the activities of BCAR-OPS 3.890 are being performed in accordance with the accepted procedures;

(2) Monitoring that all contracted maintenance is carried out in accordance with the contract; and

(3) Monitoring the continued compliance with the requirements of this Subpart.

(b) Where the operator is approved in accordance with BCAR-145, the quality system may be combined with that required by BCAR-145.

BCAR-OPS 3.905 - Operator's Maintenance Management Exposition

(a) An operator must provide an operator's Maintenance Management exposition containing details of the organization structure including:

(1) The nominated post holder responsible for the maintenance system required by BCAR-OPS 3.175(i)(2) and the person, or group of persons, referred to in BCAR-OPS 3.895(b);

(2) The procedures that must be followed to satisfy the maintenance responsibility of BCAR-OPS 3.890 and the quality functions of BCAR-OPS 3.900, except that where the operator is appropriately approved as a maintenance organization in accordance with BCAR-145, such details may be included in the BCAR-145 exposition.

(b) An operator's maintenance management exposition and any subsequent amendment must be approved by the Department of Civil Aviation.

BCAR-OPS 3.910 - Operator's helicopter maintenance program

(a) An operator must ensure that the helicopter is maintained in accordance with the operator's helicopter maintenance program. The program must contain details, including frequency, of all maintenance required to be carried out. The program will be required to include a reliability program when the Department of Civil Aviation determines that such a reliability program is necessary.

(b) An operator's helicopter maintenance program and any subsequent amendment must be approved by the Department of Civil Aviation.

BCAR-OPS 3.915 - Operator's Helicopter Technical Log

(a) An operator must use a helicopter technical log system containing the following information for each helicopter:

(1) Information about each flight necessary to ensure continued flight safety;

(2) The current helicopter certificate of release to service;

(3) The current maintenance statement giving the helicopter maintenance status of what scheduled and out of phase maintenance is next due except that the Department of Civil Aviation may agree to the maintenance statement being kept elsewhere;

(4) All outstanding deferred defects that affect the operation of the helicopter; and

(5) Any necessary guidance instructions on maintenance support arrangements.

(b) The helicopter technical log and any subsequent amendment must be approved by the Department of Civil Aviation.

BCAR-OPS 3.920 - Maintenance Records

(a) An operator shall ensure that the helicopter technical log is retained for 24 months after the date of the last entry.

(b) An operator shall ensure that a system has been established to keep, in a form acceptable to the Department of Civil Aviation, the following records for the periods specified:

(1) All detailed maintenance records in respect of the helicopter and any helicopter

component fitted thereto - 24 months after the helicopter or helicopter component was released to service;

(2) The total time and flight cycles as appropriate, of the helicopter and all life-limited helicopter components - 12 months after the helicopter has been permanently withdrawn from service;

(3) The time and flight cycles as appropriate, since last overhaul of the helicopter or helicopter component subjected to an overhaul life - until the helicopter or helicopter component overhaul has been superseded by anther overhaul of equivalent work scope and detail;

(4) The current helicopter inspection status such that compliance with the approved operator's helicopter maintenance program can be established until the helicopter or helicopter component inspection has been superseded by another inspection, of equivalent work scope and detail;

(5) The current status of airworthiness directives applicable to the helicopter and helicopter components - 12 months after the helicopter has been permanently withdrawn from service; and
(6) Details of current modifications and repairs to the helicopter, engine(s), rotor and transmission components and any other helicopter component vital to flight safety - 12 months after the helicopter has been permanently withdrawn from service.
(c) An operator shall ensure that when a helicopter is permanently transferred from one operator to another operator the records specified in paragraphs (a) and (b) are also transferred and the time periods prescribed will continue to apply to the new operator.

BCAR-OPS 3.925 Intentionally left blank

BCAR-OPS 3.930 - Continued Validity of the Air Operator Certificate in Respect of the Maintenance System

An operator must comply with BCAR-OPS 3.175 and 3.180 to ensure continued validity of the Air Operator Certificate in respect of the maintenance system.

BCAR-OPS 3.935 Equivalent Safety Case

An operator shall not introduce alternative procedures to those prescribed in this Subpart unless needed and an equivalent safety case has first been approved by the Department of Civil Aviation and supported ICAO.

SUBPART - N FLIGHT CREW

BCAR-OPS 3.940 - Composition of Flight Crew

Note 1: Whenever the use of flight simulator or Synthetic Training Device is required by this Subpart, it shall be approved in accordance with the requirements of BCAR-OPS.
(a) An operator shall ensure that:

(1) The composition of the flight crew and the number of flight crew members at designated crew stations are both in compliance with, and no less than the minimum specified in, the Helicopter Flight Manual;

(2) The flight crew includes additional flight crew members when required by the type of operation, and is not reduced below the number specified in the Operations Manual;

(3) All flight crew members hold an applicable and valid license acceptable to the Department of Civil Aviation and are suitably qualified and competent to conduct the duties assigned to them;

(4) Procedures are established, acceptable to the Department of Civil Aviation, to

prevent the crewing together of inexperienced flight crew members; and

(5) One pilot amongst the flight crew is designated as the commander who may delegate the conduct of the flight to another suitably qualified pilot.

(b) Pilots. An operator shall ensure that:

(1) Commanders and co-pilots on an IFR flight hold a valid instrument rating;

(2) For IFR operations using helicopters with a maximum approved passenger seating configuration of more than 9:

(i) The minimum flight crew is two qualified pilots; and

(ii) The commander holds a valid Airline Transport Pilot's License (Helicopter) (ATPL(H));

(3) For operations using helicopters with a maximum approved passenger seating configuration of more than 19:
(i) The minimum flight crew is two qualified pilots;

(ii) The commander holds a valid Airline Transport Pilot's License (Helicopter) (ATPL(H)).

(c) Helicopters not covered by sub-paragraph (b)(2) and (b)(3) above may be operated by a single pilot provided that the requirements of Appendix 1 to BCAR-OPS 3.940(c) are satisfied.

BCAR-OPS 3.945 - Conversion Training and checking

(a) An operator shall ensure that:

(1) A flight crew member completes a Type Rating course which satisfies the applicable requirements of BCAR-LPTA when changing from one type of helicopter to another type for which a new type rating is required;

(2) A flight crew member completes an operator's conversion course before commencing unsupervised line flying;

(i) When changing to a helicopter for which a new type rating is required; or

(ii) When changing operator;

(3) Conversion training is conducted by suitably qualified persons in accordance with a detailed course syllabus included in the Operations Manual acceptable to the Department of Civil Aviation;

(4) The amount of training required by the operator's conversion course is determined after due note has been taken of the flight crew member's previous training as recorded in his training records prescribed in BCAR-OPS 3.985;

(5) The minimum standards of qualification and experience required of flight crew members before undertaking conversion training are specified in the Operations Manual;

(6) Each flight crew member undergoes the checks required by BCAR-OPS 3.965(b) and the training and checks required by BCAR-OPS 3.965(d) before commencing line flying under supervision;

(7) Upon completion of line flying under supervision, the check required by BCAR-OPS 3.965(c) is undertaken;

(8) Once an operator's conversion course has been commenced, a flight crew member does not undertake flying duties on another type until the course is completed or terminated; and

(9) Crew Resource Management training is incorporated in the conversion course.

(b) In the case of changing helicopter type,

the check required by 3.965(b) may be combined with the type rating skill test required by BCAR-LPTA.

(c) The operator's conversion course and the Type Rating course required by BCAR-LPTA may be combined.

BCAR-OPS 3.950 - Differences Training and Familiarization training

(a) An operator shall ensure that a flight crew member completes:

(1) Differences training which requires additional knowledge and training on an appropriate training device:

(i) When operating a variant of a helicopter currently operated; or

(ii) When introducing a significant change of equipment and/or procedures on types or variants currently operated.

(2) Familiarization training, which requires the acquisition of additional knowledge:

(i) When operating another helicopter of the same type; or

(ii) When introducing a significant change of equipment and/or procedures on types or variants currently operated.

(b) The operator shall specify in the Operations Manual when such differences training or familiarization training is required.

BCAR-OPS 3.955 - Upgrade to commander

(See Appendix 1 to BCAR-OPS 3.955)

(a) A pilot upgrading to commander shall complete an appropriate command course.

(b) The operator shall specify in the Operations Manual a minimum experience level for upgrade to commander from within the company and for those joining as direct entry commanders.

BCAR-OPS 3.960 - Commanders - Minimum Qualification Requirements

(a) The minimum qualification requirements for a commander are either:

(1) An Airline Transport Pilot License (Helicopter) (ATPL(H)); or

(2) A Commercial Pilot's License [(Helicopter) (CPL(H))provided that:
(i) When conducting operations under instrument flight rules (IFR), the commander has a minimum of 700 hours total flight time on helicopters which includes 300 hours as pilot-in-command (in accordance with BCAR-LPTA) and 100 hours under IFR. The 300 hours as pilot-in-command may be substituted by co-pilot hours on a 2 for 1 basis provided those hours were gained within an established two pilot crew concept system described in the Operations Manual;
(ii) When conducting operations under visual meteorological conditions (VMC) at night, a commander, without a valid instrument rating, has 300 hours total flight time on helicopters which includes 100 hours as pilot-in-command and 10 hours at night as pilot flying.

BCAR-OPS 3.965 - Recurrent Training and Checking

(See Appendix 1 to BCAR-OPS 3.965)

(a) General - An operator shall ensure that:

(1) Each flight crew member undergoes recurrent training and checking and that all such training and checking is relevant to the type or variant of helicopter on which the crew member is certificated to operate;

(2) A recurrent training and checking program is established in the Operations Manual and approved by the Department of Civil Aviation;

(3) Recurrent training is conducted by the following personnel:

(i) Ground and refresher training by a suitably qualified person;

(ii) Helicopter/flight simulator training by a Type Rating Instructor (TRI), or in the case of the flight simulator, a Synthetic Flight Instructor (SFI), provided that the TRI or SFI satisfies the operator's experience and knowledge requirements sufficient to instruct on the items specified in Appendix 1 to BCAR-OPS 3.965(a)(i)(A) and (B);

(iii) Emergency and safety equipment training and checking by suitably qualified personnel; and

(iv) Crew Resource Management (CRM) training by suitably qualified personnel.

(4) Recurrent checking is conducted by the following personnel:

(i) Operator proficiency checks by a Type Rating Examiner; and

(ii) Line checks by commanders nominated by the operator and acceptable to the Department of Civil Aviation.

(5) Each flight crew member undergoes operator proficiency checks as part of a normal flight crew complement.

(b) Operator Proficiency Check

(1) An operator shall ensure that:
(i) Each flight crew member undergoes operator proficiency checks to demonstrate his competence in carrying out normal, abnormal and emergency procedures; and

(ii) The check must be conducted without external visual references, as appropriate, when it is likely that the crew member will be required to operate under IFR.

(2) The period of validity of an operator proficiency check shall be 6 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 6 calendar months from the expiry date of that previous operator proficiency check. Before a flight crew member, without a valid instrument rating, may operate VMC at night he will be required to undergo a proficiency check at night. Thereafter, each second proficiency check shall then be conducted at night.

(c) Line Check. An operator shall ensure that each flight crew member undergoes a line check on the helicopter to demonstrate his competence in carrying out normal line operations described in the Operations Manual. The period of validity of a line 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 line check the period of validity shall extend from the date of issue until 12 calendar months from the expiry date of that previous line check.

(d) Emergency and Safety Equipment training and checking. An operator shall ensure that each flight crew member undergoes training and checking on the location and use of all emergency and safety equipment carried. The period of validity of an emergency and safety equipment 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 emergency and safety check, the period of validity shall extend from the date of issue until 12 calendar months from the expiry date of that previous emergency and safety equipment check.

(e) Crew Resource Management. An operator shall ensure that each flight crew member undergoes Crew Resource Management training as part of recurrent

training.

(f) Ground and Refresher training. An operator shall ensure that each flight crew member undergoes ground and refresher training at least every 12 calendar months. If the training is conducted within 3 calendar months prior to the expiry of the 12 calendar months period, the next ground and refresher training must be completed within 12 calendar months of the original expiry date of the previous ground and refresher training.

(g) Helicopter/flight simulator training. An operator shall ensure that each flight crew member undergoes helicopter/flight simulator training at least every 12 calendar months. If the training is conducted within 3 calendar months prior to the expiry of the 12 calendar months period, the next helicopter/flight simulator training must be completed within 12 calendar months of the original expiry date of the previous ground and refresher training.

BCAR-OPS 3.968 - Pilot qualification to operate in either pilot's seat

(See Appendix 1 to BCAR-OPS 3.968)

(a) An operator shall ensure that:
(1) A pilot who may be assigned to operate in either pilot's seat completes appropriate training and checking; and

(2) The training and checking program is specified in the Operations Manual and is acceptable to the Department of Civil Aviation.

BCAR-OPS 3.970 - Recent experience

(a) An operator shall ensure that, except as permitted in sub-paragraph (b) below, a pilot does not operate a helicopter unless he has carried out at least three take-offs, three circuits and three landings as pilot flying in a helicopter of the same type or a flight simulator, of the helicopter type to be used, in the preceding 90 days. For night VMC operations, a pilot without a valid instrument rating must have carried out at least three take-offs, three circuits and three landings at night in the preceding 90 days.

(b) The 90 day period prescribed in subparagraph (a) above may be extended up to a maximum of 120 days by line flying under the supervision of a nominated commander.

BCAR-OPS 3.975 - Route/Role/Area - Competence Qualification

(a) An operator shall ensure that, prior to being assigned as commander or as pilot to whom the conduct of flight may be delegated by the commander on a route, in a role or an area, the pilot has obtained adequate knowledge of the route to be flown and of the heliports (including alternates), facilities and procedures to be used.

(b) The period of validity of the route/role/area competence qualification shall be 12 calendar months in addition to the remainder of:

(1) The month of qualification; or

(2) The month of the latest operation on the route, in the role or area.

(c) The route/role/area competence qualification shall be revalidated by operating on the route, in the role or area within the period of validity prescribed in sub-paragraph (b) above.

(d) If revalidated within the final 3 calendar months of validity of previous route/role/area competence qualification, the period of validity shall extend from the date of revalidation until 12 calendar months from the expiry date of that previous route/role/area competence qualification.

BCAR-OPS 3.978

Intentionally left blank

BCAR-OPS 3.980 - Operation on more than one type or variant

(a) An operator shall ensure that a flight crew member does not operate more than one type or a variant unless:

(1) The flight crew member is competent to do so; and
(2) Appropriate procedures, approved by the Department of Civil Aviation are included in the Operations Manual.

BCAR-OPS 3.985 - Training Records

(a) An operator shall:

(1) Maintain records of all training, checking and qualification prescribed in BCAR-OPS 3.945, 3.955, 3.965, 3.968 and 3.975 undertaken by a flight crew member; and

(2) Make the records of all conversion courses and recurrent training and checking available, on request, to the flight crew member concerned.

Appendix 1 to BCAR-OPS 3.940(c) - Single pilot operations under IFR or at night

(a) Helicopters referred to in BCAR-OPS 3.940(c) may be operated by a single pilot under IFR or at night when the following requirements are satisfied:

(1) The operator shall include in the Operations Manual a pilot's conversion and recurrent training program which includes the additional requirements for a single pilot operation;

(2) Training and Recency. Attention shall be given to cockpit procedures, especially in respect of:

(i) Engine management and emergency handling;

(ii) Use of normal, abnormal and emergency checklist;

(iii) ATC communication;

(iv) Cockpit procedures in respect of departure and approach;

(v) Autopilot management, if applicable; and

(vi) Simplified in-flight documentation;

(3) The recurrent checks required by BCAR-OPS 3.965 shall be performed in the single-pilot role on the particular helicopter type in an environment representative of the operation;

(4) The pilot shall meet the commanders' minimum qualification requirements of BCAR-OPS 3.960.

(5) For IFR operations, the pilot shall have experience as follows:

(i) 25 hours total IFR flight experience in the relevant operating environment.

(ii) 25 hours flight experience on the specific type of helicopter, approved for single pilot IFR, of which 10 hours is as commander or commander under supervision, including 5 sectors of IFR line flying under supervision using the single pilot procedures.

(iii)The minimum required recent experience for a pilot engaged in a single-pilot operation under IFR shall be 5 IFR flights, including 3 instrument approaches, carried out during the preceding 90 days on the helicopter type in the single-pilot role. This requirement may be replaced by an IFR instrument approach check on the helicopter type.

Note: Additional equipment requirements for alleviating pilot workload are prescribed in BCAR-OPS 3.655.

Appendix 1 to BCAR-OPS 3.955 - Upgrading to Commander

(a) Upgrade Training Course

(1) The command course required by BCAR-OPS 3.955(a) must be specified in the Operations Manual and include at least the following:

(i) Training in a flight simulator (including Line Orientated Flying Training) and/or flying training including a proficiency check operating as commander;

(ii) Operator command responsibilities;

(iii) Line training in command under supervision. A minimum of 10 hours including at least 10 sectors is required for pilots already qualified on the helicopter type;

(iv) Completion of a commander's line check and route/role/area competency qualification.

(v) For initial upgrade to commander the course shall also include Crew Resource Management training.

(2) Combined Upgrading and Conversion Course. If a pilot is converting from one helicopter type or variant to another when upgrading to commander:

(i) The Command Course shall also include a Conversion Course in accordance with BCAR-OPS 3.945.

(ii) Additional sectors shall be required for a pilot transitioning on to a new type of helicopter.

Appendix 1 to BCAR-OPS 3.965 - Recurrent Training and Checking

(a) Recurrent Training - Recurrent training shall comprise:

(1) Ground and refresher training

(i) The ground and refresher training program shall include:

(A) Helicopter systems;

(B) Operational procedures and requirements including ground de-/anti-icing and pilot incapacitation; and

(C) Accident/Incident and occurrence review.

(ii) Knowledge of the ground and refresher training shall be verified by a questionnaire or other suitable methods.

(2) Helicopter/flight simulator training

(i) The helicopter/flight simulator training program shall be established such that all major failures of helicopter systems and associated procedures will be covered within a 3 year period.

(ii) When engine malfunctions are simulated, if no synthetic training device is available, these emergencies may be covered in the helicopter using a safe airborne simulation. In the event that such training is conducted in the helicopter, due consideration must be given to the effect of any subsequent failure and the exercise must be preceded by a comprehensive briefing.

(iii) Helicopter/flight simulator training may be combined with the operator proficiency check.

(3) Emergency and Safety Equipment Training

(i) The emergency and safety equipment training program may be combined with emergency and safety equipment checking and shall be conducted in a helicopter or a suitable alternative training device.

(ii) Every year the emergency and safety

equipment training program must include the following:

(A) Actual donning of a lifejacket, when forming part of the equipment and when applicable;

(B) Actual donning of protective breathing equipment, when applicable;

(C) Actual handling of fire extinguishers, of the type used:

(D) Instruction on the location and use of all emergency and safety equipment carried on the helicopter:

(E) Instruction on the location and use of all types of exits; and

(F) Security procedures.

(iii) Every three years the program of training must include the following:

(A) Actual operation of all types of exits;

(B) Actual fire-fighting using equipment representative of that carried in the helicopter on an actual or simulated fire except that, with Halon extinguishers, an alternative method acceptable to the Department of Civil Aviation may be used;

(C) The effects of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment, if applicable;

(D) Demonstration and use of the life-rafts where fitted; and

(E) First aid.

(4) Crew Resource Management training.

(b) Recurrent checking. Recurrent checking shall comprise:

(1) Operator proficiency checks.

(i) Where applicable, proficiency checks must include the following abnormal/emergency procedures:

(A) Engine fire;

(B) Fuselage fire;

(C) Emergency operation of under carriage;

(D) Fuel dumping;

(E) Engine Failure and relight;

(F) Hydraulic failure;

(G) Electrical failure:

(H) Engine failure during take-off before decision point;

(I) Engine failure during take-off after decision point:

(J) Engine failure during landing before decision point;

(K) Engine failure during landing after decision point;

(L) Flight and engine control system malfunctions;

(M) Recovery from unusual attitudes;

(N) Landing with one or more engine(s) inoperative;

(O) IMC auto-rotation techniques;

(P) Auto-rotation to a designated area;

(Q) Pilot incapacitation; and

(R) Directional control failures and malfunctions.

(ii) For pilots required to engage in IFR operations proficiency checks include the

following additional abnormal/emergency procedures:

(A) Precision instrument approach to minima with, in the case of multi-engine helicopters, a simulated failure of one engine;

(B) "Go-around" on instruments from minima with, in the case of multi-engine helicopters, a simulated failure of one engine;

(C) Non precision approach to minima;

(D) Landing with a simulated failure of one or more engines; and

(E) Where appropriate to the helicopter type, approach with flight control system/flight director system malfunctions, flight instrument and navigation equipment failures.

(2) Emergency and safety equipment checks. The items to be checked shall be those for which training has been carried out in accordance with sub-paragraph (a)(3) above.

(3) Line checks;

(i) Line checks must establish the ability to perform satisfactorily a complete line operation including pre-flight and post-flight procedures and use of the equipment provided, as specified in the Operations Manual.

(ii) The flight crew must be assessed on their Crew Resource Management skills.

(iii) When pilots are assigned duties as pilot flying and pilot non-flying they must be checked in both functions.

(iv) Line checks must be completed in a helicopter.

(v) Line checks must be conducted by commanders nominated by the operator and acceptable to the Department of Civil Aviation.

(4) Single pilot operations;

(i) The recurrent checks required by sub-paragraphs (1) to (3) above shall be performed in the single pilot role on a particular helicopter type in an environment representative of the operation.

Appendix 1 to BCAR-OPS 3.968 - Pilot qualification to operate in either pilot's seat

(a) Commanders whose duties also require them to carry out the duties of co-pilot, or commanders required to conduct training or examining duties, shall complete additional training and checking as specified in the Operations Manual, concurrent with the operator proficiency checks prescribed in BCAR-OPS 3.965(b). This additional training must include at least the following:

(1) An engine failure during take-off;

(2) A one engine inoperative (OEI) approach and "go-around"; and

(3) A one engine inoperative landing.

(b) When engine-out maneuvers are carried out in a helicopter, the engine failure must be simulated.

(c) When operating in the co-pilot's seat, the checks required by BCAR-OPS 3.965 and BCAR-OPS 3.968 for operating in the commanders seat must, in addition, be valid and current.

(d) A pilot relieving the commander shall have demonstrated, concurrent with the operator proficiency checks prescribed in BCAR-OPS 3.965(b), practice of drills and procedures which would not, normally, be the relieving pilot's responsibility.] Where the differences between left and right seats are not significant (for example because of use of autopilot) then practice may be conducted in either seat.

(e) A pilot other than the commander occupying the commander's seat shall demonstrate practice of drills and procedures, concurrent with the operator proficiency checks prescribed in BCAR-OPS 3.965(b), which would otherwise have been the commander's responsibility acting as pilot non-flying. Where the differences between right and left seats are not significant (for example because of use of autopilot) then practice may be conducted in either seat.

SUBPART - O CABIN CREW

BCAR-OPS 3.988 - Applicability

An operator shall ensure that all crew members, other than flight crew members, assigned by the operator to duties in the passenger compartment of a helicopter comply with the requirements of this Subpart except for additional crew members solely assigned to specialist duties.

BCAR-OPS 3.990 - Number and composition of Cabin Crew

(a) An operator shall not operate a helicopter carrying more than 19 passengers unless at least one cabin crew member is carried for the purposes of performing duties, specified in the Operations Manual, in the interests of the safety of passengers, assigned by the operator or the commander.

(b) An operator shall ensure that not less than one cabin crew member for every 50, or fraction of 50, passenger seats installed on the same deck of the helicopter is carried on any flight where subparagraph (a) above applies. In any event, the minimum number of crew members must not be less than the number of crew who actually participated in the helicopter cabin during the relevant emergency evacuation demonstration or were assumed to have taken part in the relevant analysis.

(c) In unforeseen circumstances the required minimum number of cabin crew may be reduced provided that:

(1) The number of passengers has been reduced in accordance with procedures specified in the Operations Manual; and
(2) A report is submitted to the Department of Civil Aviation after completion of the flight.

(d) The number of cabin crew may be reduced in circumstances associated with reduced passenger loads, provided that written permission has been granted by the Department of Civil Aviation.

BCAR-OPS 3.995 - Minimum requirements

(a) An operator shall ensure that each cabin crew member:

(1) Is at least 18 years of age;

(2) Has passed an initial medical examination or assessment and is found medically fit to discharge the duties specified in the Operations Manual; and

(3) Remains medically fit to discharge the duties specified in the Operations Manual.

(b) An operator shall ensure that each cabin crew member is competent to perform his duties in accordance with procedures specified in the Operations Manual.

BCAR-OPS 3.1000 - Senior cabin crew members

(a) An operator shall nominate a senior cabin crew member whenever more than one cabin crew member is assigned.

(b) The senior cabin crew member shall have responsibility to the commander for the conduct and co-ordination of normal and emergency procedure(s) specified in the Operations Manual.

(c) Where required by BCAR-OPS 3.990 to carry more than one cabin crew member, an operator shall not appoint a person to the post of senior cabin crew member unless that person has at least one year's experience as an operating cabin crew member and has completed an appropriate course.

(d) An operator shall establish procedures to select the next most suitably qualified cabin crew member to operate as senior cabin crew member in the event of the nominated senior cabin crew member becoming unable to operate. Such procedures must be acceptable to the Department of Civil Aviation and take account of a cabin crew member's operational experience

BCAR-OPS 3.1005

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BCAR-OPS 3.1010 - Initial and Conversion Training

(a) An operator must ensure that a cabin crew member completes an appropriate initial or conversion course when:

(1) Joining an operator;

(2) Changing from one helicopter to another type or variant;

(3) When new roles/procedures or equipment are introduced on existing types or variants.

(b) The training and checking required by sub-paragraph (a) above must be followed by flying under supervision. This requires the trainee to be carried in addition to the minimum required crew necessary for the specified emergency procedure(s). The duration of such flying under supervision shall be appropriate to the type of operation.

(c) An operator shall determine the content of the conversion course after due note has been taken of the cabin crew member's previous training as recorded in his training records required by BCAR-OPS 3.1035.

(d) An operator shall ensure that cabin crew members are given training whenever new procedures or equipment are introduced on existing aircraft types or variants when appropriate.

(e) An operator shall ensure that all type or variant conversion training is conducted in a structured and realistic manner, in accordance with a detailed syllabus included in the Operations Manual. It must include the use of all safety equipment and procedures applicable to the variant or type of helicopter, and involves experience on either a representative mock-up or on the actual helicopter.

(f) An operator shall ensure that a cabin crew member undergoes at least the checks required by BCAR-OPS 3.1025 whatever the circumstances.

BCAR-OPS 3.1012

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BCAR-OPS 3.1015 - Recurrent training

(See Appendix 1 to BCAR-OPS 3.1015)

(a) An operator shall ensure that each cabin crew member undergoes recurrent training, covering the actions assigned to each crew member in normal and emergency procedures and drills relevant to the type(s) and/or variant(s) of helicopter on which they operate in accordance with Appendix 1 to BCAR-OPS 3.1015.

(b) An operator shall ensure that the recurrent training and checking program approved by the Department of Civil Aviation includes theoretical and practical instruction, together with individual practice, as prescribed in Appendix 1 to BCAR-OPS 3.1015.

(c) The period of validity of recurrent training and the associated checking required by BCAR-OPS 3.1025 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 check, the period of validity shall extend from the date of issue until 12 calendar months from the expiry date of that previous check.

BCAR-OPS 3.1020 - Refresher Training

(See Appendix 1 to BCAR-OPS 3.1020)

An operator shall ensure that each cabin crew member who has been absent from all flying duties for more than 6 calendar months and still remains within the period of validity of the previous check required by BCAR-OPS 3.1025(b)(3) completes refresher training specified in the Operations Manual as prescribed in Appendix 1 to BCAR-OPS 3.1020.

BCAR-OPS 3.1025 - Checking

(a) An operator shall ensure that during or following completion of the training required by BCAR-OPS 3.1010 and 3.1015, each cabin crew member undergoes a check covering the training received in order to verify his proficiency in carrying out normal and emergency safety duties. These checks must be performed by personnel acceptable to the Department of Civil Aviation.

(b) An operator shall ensure that, on completion of the training required by BCAR-OPS 3.1010, 3.1015 and 3.1020, cabin crew members undergo checks as follows:

(1) Initial and Conversion training.

(2) Recurrent training. The items listed in Appendix 1 to BCAR-OPS 3.1015 as appropriate.

(3) Refresher training. The items listed in Appendix 1 to BCAR-OPS 3.1020.

BCAR-OPS 3.1030 - Operation on more than one type or variant

(a) An operator shall ensure that each cabin crew member does not operate on more than three helicopter types except that, with the approval of the Department of Civil Aviation, the cabin crew member may operate on four helicopter types, provided that safety equipment and emergency procedures for at least two of the types are similar.

(b) For the purposes of sub-paragraph (a) above, variants of a helicopter type are considered to be different types if they are not similar in all the following aspects:

(1) Emergency exit operation;

(2) Location and type of safety equipment; and

(3) Emergency procedures.

BCAR-OPS 3.1035 - Training records

(a) An operator shall:

(1) Maintain records of all training and checking required by BCAR-OPS 3.1010, 3.1015, 3.1020 and 3.1025; and

(2) Make the records of all initial, conversion and recurrent training and checking available, on request, to the cabin crew member concerned.

Appendix 1 to BCAR-OPS 3.1015 - Recurrent Training

(a) An operator shall ensure that recurrent training is conducted by suitably qualified persons.

(b) An operator shall ensure that every 12 calendar months the program of practical

training includes the following:

(1) Emergency drills including pilot incapacitation procedures;

(2) Evacuation drills including crowd control techniques;

(3) The location and handling of emergency equipment including the donning of life jackets;

(4) First aid and the contents of the first-aid kit(s);

(5) Stowage of articles in the cabin;

(6) Security procedures;

(7) Dangerous goods transportation procedures;

(8) Touch drills for opening normal and emergency exits; and

(9) Crew Resource Management training.

(c) Every 3 years this training must also include:

(1) Actual opening of emergency exits;

(2) Practical and adequate training for each cabin crew in fire-fighting using the helicopter equipment in a realistic scenario;

(3) Practical training and demonstration of the effects of smoke in a confined area;

(4) Handling of pyrotechnics where fitted;

(5) Where fined, demonstration in the use of the life-raft.

Appendix 1 to BCAR-OPS 3.1020 - Refresher Training

(a) An operator shall ensure that refresher training includes at least the following:

(1) Emergency drills including pilot incapacitation procedures;

(2) Evacuation drills including crowd control techniques;

(3) The location and handling of emergency equipment including the donning of life jackets;

(4) First aid and the contents of the first-aid kit(s);

(5) Stowage of articles in the cabin;

(6) Security procedures;

(7) Requirements for the safe transportation of dangerous goods;

(8) Touch drills for opening of emergency exits; and

(9) Crew Resource Management training.

SUBPART - P MANUALS, LOGS AND RECORDS

BCAR-OPS 3.1040 - General Rules for Operations Manuals

(a) An operator shall ensure that the Operations Manual contains all instructions and information necessary for operations personnel to perform their duties.

(b) An operator shall ensure that the contents of the Operations Manual, including all amendments or revisions, do not contravene the conditions contained in the Air Operator Certificate (AOC) or [any applicable regulations and are acceptable to, or, where applicable, approved by, the Department of Civil Aviation.

(c) Unless otherwise approved by the Department of Civil Aviation, or prescribed by national law, an operator must prepare the Operations Manual in the English

language. In addition, an operator may translate and use that manual, or parts thereof, into another language.

(d) Should it become necessary for an operator to produce new Operations Manuals or major parts/volumes thereof, he must comply with subparagraph (c) above. In all other cases, an operator must comply with sub-paragraph (c) above.

(e) An operator may issue an Operations Manual in separate volumes.

(f) An operator shall ensure that all operations personnel have easy access to a copy of each part of the Operations Manual, which is relevant to their duties. In addition, the operator shall supply crew members with a personal copy of, or sections from, Parts A and B of the Operations Manual as are relevant for personal study.
(g) An operator shall ensure that the Operations Manual is amended or revised so that the instructions and information contained therein are kept up to date. The operator shall ensure that all operations personnel are made aware of such changes that are relevant to their duties.

(h) Each holder of an Operations Manual, or appropriate parts of it, shall keep it up to date with the amendments or revisions supplied by the operator.

(i) An operator shall supply the Department of Civil Aviation with intended amendments and revisions in advance of the effective date. When the amendment concerns any part of the Operations Manual, which must be approved in accordance with BCAR-OPS 3, this approval shall be obtained before the amendment becomes effective. When immediate amendments or revisions are required in the interest of safety, they may be published and applied immediately, provided that any approval required has been applied for.

(j) An operator shall incorporate all amendments and revisions required by the Department of Civil Aviation.

(k) An operator must ensure that information taken from approved documents, and any amendment of such approved documentation, is correctly reflected in the Operations Manual and that the Operations Manual contains no information contrary to any approved documentation. However, this requirement does not prevent an operator from using more conservative data and procedures.

(l) An operator must ensure that the contents of the Operations Manual are presented in a form in which they can be used without difficulty.

(m) An operator may be permitted by the Department of Civil Aviation to present the Operations Manual or parts thereof in a form other than on printed paper. In such cases, an acceptable level of accessibility, usability and reliability must be assured.

(n) The use of an abridged form of the Operations Manual does not exempt the operator from the requirements of BCAR-OPS 3.130.

BCAR-OPS 3.1045 - Operations Manual - structure and contents

(See Appendix 1 to BCAR-OPS 3.1045)

(a) An operator shall ensure that the main structure of the Operations Manual is as follows:

Part A. General/Basic

This part shall comprise all non type-related operational policies, instructions and procedures needed for a safe operation.

Part B. Helicopter Operating Matters
This part shall comprise all type-related instructions and procedures needed for a safe operation. It shall [take account of any

differences between types, variants or individual helicopters used by the operator.

Part C. Route/Role/Area and Heliport Instructions and Information

This part shall comprise all instructions and information needed for the area of operation.

Part D. Training

This part shall comprise all training instructions for personnel required for a safe operation.

(b) An operator shall ensure that the contents of the Operations Manual are in accordance with Appendix 1 to BCAR-OPS 3.1045 and relevant to the area(s) and type(s) of operation.

(c) An operator shall ensure that the detailed structure of the Operations Manual is acceptable to the Department of Civil Aviation.

BCAR-OPS 3.1050 - Helicopter Flight Manual

An operator shall keep a current approved Helicopter Flight Manual or equivalent document for each helicopter that it operates.

BCAR-OPS 3.1055 - Journey log

(a) An operator shall retain the following information for each flight in the form of a Journey Log:

(1) Helicopter registration;

(2) Date;

(3) Name(s) of crew member(s);

(4) Duty assignment of crew member(s);

(5) Place of departure;

(6) Place of arrival;

(7) Time of departure;

(8) Time of arrival;

(9) Hours of flight;

(10) Nature of flight;

(11) Incidents, observations (if any); and

(12) Commander's signature (or equivalent).

(b) An operator may be permitted not to keep a helicopter journey log, or parts thereof, by the Department of Civil Aviation if the relevant information is available in other documentation.

BCAR-OPS 3.1060 - Operational flight plan

(a) An operator must ensure that the operational flight plan used and the entries made during flight contain the following items:

(1) Helicopter registration;

(2) Helicopter type and variant;

(3) Date of flight;

(4) Flight identification;

(5) Names of flight crew members;

(6) Duty assignment of flight crew members;

(7) Place of departure;

(8) Time of departure;

(9) Place of arrival (planned and actual);

(10) Time of arrival;

(11) Type of operation (VFR, HEMS, etc.);

(12) Route and route segments with

checkpoints/waypoints, distances, time and tracks;

(13) Planned cruising speed and flying times between check-points/way-points. Estimated and actual times overhead;

(14) Safe altitudes and minimum levels;

(15) Planned altitudes and flight levels;

(16) Fuel calculations (records of in-flight fuel checks);

(17) Fuel on board when starting engines;

(18) Alternate(s) for destination and, where applicable, take-off and en-route, including information required in sub-paragraphs (12), (13), (14), and (15) above;

(19) Initial ATS Flight Plan clearance and subsequent re-clearance;

(20) In-flight re-planning calculations; and

(21) Relevant meteorological information.

(b) Items, which are readily available in other documentation or from an acceptable source or are irrelevant to the type of operation may be omitted from the operational flight plan.

(c) An operator must ensure that the operational flight plan and its use is described in the Operations Manual.

(d) An operator shall ensure that all entries on the operational flight plan are made concurrently and that they are permanent in nature.

BCAR-OPS 3.1065 - Document storage periods

An operator shall ensure that all records and all relevant operational and technical information for each individual flight, are stored for the periods prescribed in Appendix 1 to BCAR-OPS 3.1065.

BCAR-OPS 3.1070 - Operator's maintenance management exposition

An operator shall keep a current approved maintenance management exposition as prescribed in BCAR-OPS 3.905.

BCAR-OPS 3.1071 - Helicopter Technical log

An operator shall keep a helicopter technical log as prescribed in BCAR-OPS 3.915.

Appendix 1 to BCAR-OPS 3.1045 - Operations Manual Contents

An operator shall ensure that the Operations Manual contains the following:

A GENERAL/BASIC

0 ADMINISTRATION AND CONTROL OF OPERATIONS MANUAL

0.1 Introduction

(a) A statement that the manual complies with all applicable regulations and with the terms and conditions of the applicable Air Operator Certificate.

(b) A statement that the manual contains operational instructions that are to be complied with by the relevant personnel.

(c) A list and brief description of the various parts, their contents, applicability and use.

(d) Explanations and definitions of terms and words needed for the use of the manual.

0.2 System of amendment and revision

(a) Who is responsible for the issuance and insertion of amendments and revisions.

(b) A record of amendments and revisions

with insertion dates and effective dates.

(c) A statement that handwritten amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety.

(d) A description of the system for the annotation of pages and their effective dates.

(e) A list of effective pages.

(f) Annotation of changes (on text pages and, as far as practicable, on charts and diagrams).

(g) Temporary revisions.

(h) A description of the distribution system for the manuals, amendments and revisions.

1 ORGANIZATION AND RESPONSIBILITIES

1.1 Organizational structure. A description of the organizational structure including the general company organigram and operations department organigram. The organigram must depict the relationship between the Operations Department and the other Departments of the company. In particular, the subordination and reporting lines of all Divisions, Departments etc., which pertain to the safety of flight operations, must be shown.

1.2 Nominated post holders. The name of each nominated post holder responsible for flight operations, the maintenance system, crew training and ground operations, as prescribed in BCAR-OPS III Subpart C. A description of their function and responsibilities must be included.

1.3 Responsibilities and duties of operations management personnel. A description of the duties, responsibilities and authority of operations management personnel pertaining to the safety of flight operations and the compliance with the applicable regulations.

1.4 Authority, duties and responsibilities of the commander. A statement defining the authority, duties and responsibilities of the commander.

1.5. Duties and responsibilities of crew members other than the commander

2 OPERATIONAL CONTROL AND SUPERVISION

2.1 Supervision of the operation by the operator. A description of the system for supervision of the operation by the operator (see BCAR-OPS 3.175(g)). This must show how the safety of flight operations and the qualifications of personnel are supervised. In particular, the procedures related to the following items must be described:

(a) License and qualification validity;

(b) Competence of operations personnel; and

(c) Control, analysis and storage of records, flight documents, additional information and data.

2.2 System of promulgation of additional operational instructions and information. A description of any system for promulgating information, which may be of an operational nature but is supplementary to that in the Operations Manual. The applicability of this information and the responsibilities for its promulgation must be included.

2.3 Accident prevention and flight safety program. A description of the main aspects of the flight safety program.

2.4 Operational control. A description of the procedures and responsibilities necessary to exercise operational control with respect to flight safety.

2.5 Powers of the Department of Civil Aviation

A description of the powers of the Department of Civil Aviation.

3 QUALITY SYSTEM

A description of the quality system adopted including at least:

(a) Quality policy;
(b) A description of the organization of the Quality System; and

(c) Allocation of duties and responsibilities.

4 CREW COMPOSITION

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

(a) The type of helicopter being used;

(b) The area and type of operation being undertaken;

(c) The phase of the flight;

(d) The minimum crew requirement and flight duty period planned;

(e) Experience (total and on type), recency and qualification of the crew members; and

(f) The designation of the commander.

(g) The designation of the senior cabin crew member.

4.2 Intentionally blank

4.3 Flight crew incapacitation. Instructions on the succession of command in the event of flight crew incapacitation.
4.4 Operation on more than one type. A statement indicating which helicopters are considered as one type for the purpose of:

(a) Flight crew scheduling; and

(b) Cabin crew scheduling.

5 QUALIFICATION REQUIREMENTS

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

5.2 Flight crew

(a) Commander.

(b) Pilot relieving the commander.

(c) Co-pilot.

(d) Pilot under supervision.

(e) System panel operator.

(f) Operation on more than one type or variant.

5.3 Cabin crew

(a) Senior cabin crew member.

(b) Cabin crew member.

(i) Required cabin crew member.
(ii) Additional cabin crew member and cabin crew member during familiarization flights.

(c) Operation on more than one type or variant.

5.4 Training, checking and supervision personnel

(a) For flight crew.

(b) For cabin crew.

5.5 Other operations personnel

6 CREW HEALTH PRECAUTIONS

6.1 Crew health precautions. The relevant regulations and guidance to crew members concerning health including:

(a) Alcohol and other intoxicating liquor;

(b) Narcotics;

(c) Drugs;

(d) Sleeping tablets;

(e) Pharmaceutical preparations;

(f) Immunization;

(g) Deep diving;

(h) Blood donation;

(i) Meal precautions prior to and during flight;

(j) Sleep and rest; and

(k) Surgical operations.

7 FLIGHT TIME LIMITATIONS

7.1 Flight and Duty Time Limitations and Rest Requirements. A description of the flight and duty time limitations and rest requirements prescribed in BCAR-OPS 3 Subpart Q as applicable to the operation.
7.2 Exceedances of flight and duty time limitations and/or reductions of rest periods. Conditions under which flight and duty time may be exceeded or rest periods may be reduced and the procedures used to report these modifications.

8 OPERATING PROCEDURES

8.1 Flight Preparation Instructions. As applicable to the operation:

8.1.1 Minimum Flight Altitudes. A description of the method of determination and application of minimum altitudes including:

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

(b) A procedure to establish the minimum altitudes/flight levels for IFR flights.

8.1.2 Criteria for determining the usability of aerodromes

8.1.3 Methods for the determination of aerodrome operating minima. The method for establishing aerodrome operating minima for IFR flights in accordance with BCAR-OPS 3 Subpart E. Reference must be made to procedures for the determination of the visibility and/or runway visual range and for the applicability of the actual visibility observed by the pilots, the reported visibility and the reported runway visual range.

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

8.1.5 Presentation and Application of Aerodrome and En-route Operating Minima

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

8.1.7 Determination of the quantities of fuel, oil and water methanol carried. The methods by which the quantities of fuel, oil and water methanol to be carried are determined and monitored in flight. This section must also include instructions on the measurement and distribution of the fluid carried on board. Such instructions must take account of all circumstances likely to be encountered on

the flight, including the possibility of in-flight replanning and of failure of one or more of the helicopter's power plants. The system for maintaining fuel and oil records must also be described.

8.1.8 Mass and Center of Gravity. The general principles of mass and center of gravity including:

(a) Definitions;

(b) Methods, procedures and responsibilities for preparation and acceptance of mass and centre of gravity calculations;

(c) The policy for using either standard and/or actual masses;

(d) The method for determining the applicable passenger, baggage and cargo mass;

(e) The applicable passenger and baggage masses for various types of operations and helicopter type;

(f) General instruction and information necessary for verification of the various types of mass and balance documentation in use;

(g) Last Minute Changes procedures;

(h) Specific gravity of fuel, oil and water methanol;
(i) Seating policy/procedures; and

(j) Standard load plans.

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

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

8.1.11 Operator's Helicopter Technical Log. The responsibilities and the use of the operator's Helicopter Technical Log must be described, including samples of the format used.

8.1.12 List of documents, forms and additional information to be carried

8.2 Ground Handling Instructions

8.2.1 Fuelling procedures. A description of fuelling procedures, including:

(a) Safety precautions during refuelling and defuelling including rotors running, engine(s) running and when an APU is in operation;

(b) Refuelling and defuelling when passengers are embarking, on board or disembarking; and

(c) Precautions to be taken to avoid mixing fuels.

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

(a) Children/infants, sick passengers and Persons with Reduced Mobility;

(b) Transportation of inadmissible passengers, deportees or persons in custody;

(c) Permissible size and weight of hand baggage;

(d) Loading and securing of items in the helicopter;

(e) Special loads and classification of load compartments;

(f) Positioning of ground equipment;

(g) Operation of helicopter doors;

(h) Safety on the ramp, including fire prevention, blast and suction areas;

(i) Start-up, ramp departure and arrival procedures;

(j) Servicing of helicopters; and
(k) Documents and forms for helicopter handling;

(l) Multiple occupancy of helicopter seats.

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

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

(a) Proprietary or commercial names;

(b) Characteristics;

(c) Effects on helicopter performance;

(d) Hold-over times; and

(e) Precautions during usage.

8.3 Flight Procedures

8.3.1 VFR/IFR Policy. A description of the policy for allowing flights to be made under VFR, or of requiring flights to be made under IFR, or of changing from one to the other.

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

(a) Standard navigational procedures including policy for carrying out independent cross-checks of keyboard entries where these affect the flight path to be followed by the helicopter;

(b) MNPS and POLAR navigation and navigation in other designated areas;

(c) RNAV. A description of the relevant RNAV procedures specified in Part C; form in which it can be used without difficulty.

(d) In-flight replanning; and

(e) Procedures in the event of system degradation.
8.3.3 Altimeter setting procedures

8.3.4 Audio voice alerting device

8.3.5 Intentionally left blank

8.3.6 Intentionally left blank
8.3.7 Policy and procedures for in-flight fuel management

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

(a) Thunderstorms;

(b) Icing conditions;

(c) Turbulence;

(d) Wind shear;

(e) Jet stream;

(f) Volcanic ash clouds;

(g) Heavy precipitation;

(h) Sand storms;

(i) Mountain waves; and

(j) Significant Temperature inversions.

8.3.9 Wake Turbulence and Rotor Downwash. Wake turbulence and rotor downwash separation, taking into account helicopter types, wind conditions and FATO location.

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

8.3.11 Use of safety belts for crew and passengers. The requirements for crew members and passengers to use safety belts and/or harnesses during the different phases of flight or whenever deemed necessary in the interest of safety.
8.3.12 Admission to Cockpit. The conditions for the admission to the cockpit of persons other than the flight crew. The policy regarding the admission of Inspectors from the Department of Civil Aviation must also be included.

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

8.3.14 Incapacitation of crew members. Procedures to be followed in the event of incapacitation of crew members in flight. Examples of the types of incapacitation and the means for recognizing them must be included.
8.3.15 Cabin Safety Requirements.

Procedures covering:

(a) Cabin preparation for flight, in-flight requirements and preparation for landing including procedures for securing cabin and galleys;
(b) Procedures to ensure that passengers are seated where, in the event that an emergency evacuation is required, they may best assist and not hinder evacuation from the helicopter;

(c) Procedures to be followed during passenger embarkation and disembarkation;

(d) Procedures in the event of fuelling with passengers on board or embarking and disembarking; and

(e) Smoking on board.

8.3.16 Passenger briefing procedures. The contents, means and timing of passenger briefing in accordance with BCAR-OPS 3.285.

8.3.17 Intentionally left blank

8.4 AWO. A description of the operational procedures associated with All Weather Operations. (See BCAR-OPS Part 3 Subparts D & E).]

8.5 Intentionally left blank

8.6 Use of the Minimum Equipment and Configuration Deviation List(s)

8.7 Non revenue flights. Procedures and limitations for:

(a) Training flights;

(b) Test flights;

(c) Delivery flights;

(d) Ferry flights;

(e) Demonstration flights; and

(f) Positioning flights,

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

8.8 Oxygen Requirements

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

8.8.2 The oxygen requirements specified for:

(a) Flight crew;

(b) Cabin crew; and

(c) Passengers.

9 DANGEROUS GOODS AND WEAPONS

9.1 Information, instructions and general guidance on the transport of dangerous goods including:

(a) Operator's policy on the transport of dangerous goods;

(b) Guidance on the requirements for acceptance, labelling, handling, stowage and segregation of dangerous goods;
(c) Procedures for responding to emergency situations involving dangerous goods;

(d) Duties of all personnel involved as per BCAR-OPS 3.1215; and

(e) Instructions on the carriage of the operator's employees.

9.2 The conditions under which weapons, munitions of war and sporting weapons may be carried.

10 SECURITY

10.1 Security instructions and guidance of a nonconfidential nature, which must include the authority, and responsibilities of operations personnel. Policies and procedures for handling and reporting crime on board such as unlawful interference, sabotage, bomb threats, and hijacking must also be included.

10.2 A description of preventative security measures and training.

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

11 HANDLING OF ACCIDENTS AND OCCURRENCES

Procedures for the handling, notifying and reporting of accidents and occurrences. This section must include:

(a) Definitions of accidents and occurrences and the relevant responsibilities of all persons involved;

(b) The descriptions of which company departments, Authorities or other institutions have to be notified by which means and in which sequence in case of an accident;
(c) Special notification requirements in the event of an accident or occurrence when dangerous goods are being carried;

(d) A description of the requirements to report specific occurrences and accidents;

(e) The forms used for reporting and the procedure for submitting them to the Department of Civil Aviation shall also be included; and

(f) If the operator develops additional safety related reporting procedures for its own internal use, a description of the applicability and related forms to be used.

12 RULES OF THE AIR

Rules of the Air including:

(a) Visual and instrument flight rules;

(b) Territorial application of the Rules of the

Air;

(c) Communication procedures including COM-failure procedures;

(d) Information and instructions relating to the interception of civil helicopters;

(e) The circumstances in which a radio listening watch is to be maintained;

(f) Signals;

(g) Time system used in operation;

(h) ATC clearances, adherence to flight plan and position reports;

(i) Visual signals used to warn an unauthorized helicopter flying in or about to enter a restricted, prohibited or danger area;

(j) Procedures for pilots observing an accident or receiving a distress transmission;
(k) The ground/air visual codes for use by survivors, description and use of signal aids; and

(l) Distress and urgency signals.

B. HELICOPTER OPERATING MATTERS TYPE RELATED

Taking account of the differences between types, and variants of types, under the following headings:

0 GENERAL INFORMATION AND UNITS OF MEASUREMENT

0.1 General Information (e.g. helicopter dimensions), including a description of the units of measurement used for the operation of the helicopter type concerned and conversion tables.

1 LIMITATIONS

1.1 A description of the certified limitations and the applicable operational limitations including:

(a) Certification status.

(b) Passenger seating configuration for each helicopter type including a pictorial presentation;

(c) Types of operation that are approved (e.g. IFR/VFR, CAT II/III, RNP Type, flights in known icing conditions etc.);

(d) Crew composition;

(e) Mass and center of gravity;
(f) Speed limitations;

(g) Flight envelope(s);

(h) Wind limits;

(i) Performance limitations for applicable configurations;
(j) Slope;

(k) Airframe contamination;

(l) System limitations.

2 NORMAL PROCEDURES

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

(a) Pre-flight;

(b) Pre-departure;

(c) Altimeter setting and checking;

(d) Taxi, Take-Off and Climb;

(e) Noise abatement;

(f) Cruise and descent;

(g) Approach, Landing preparation and briefing;

(h) VFR Approach;

(i) IFR approach;

(j) Visual Approach and circling;

(k) Missed Approach;

(l) Normal Landing;

(m) Post Landing.

3 EMERGENCY PROCEDURES

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

(b) Fire and smoke drills;

(c) Lightning strikes;

(d) Distress communications and alerting ATC to emergencies;

(e) Engine failure;

(f) System failures;

(g) Guidance for diversion in case of serious technical failure;

(h) Ground proximity warning;

(i) Wind shear;

(j) Emergency landing/ditching;

4 PERFORMANCE

4.0 Performance data must be provided in a form in which it can be used without difficulty.

4.1 Performance data. Performance material which provides the necessary data for compliance with the performance requirements prescribed in Subparts F, G H and I.

4.2 If performance data, as required for the appropriate performance class, is not available in the approved HFM, then other data acceptable to the Authority must be included. Alternatively, the Operations Manual may contain cross-reference to the approved data contained in the HFM where such data is not likely to be used often or in an emergency.
5 MASS AND BALANCE

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

(a) Calculation system (e.g. Index system);

(b) Information and instructions for completion of mass and balance documentation, including manual and computer generated types;

(c) Limiting masses and center of gravity for the types, variants or individual helicopters used by the operator; and

(d) Dry Operating mass and corresponding center of gravity or index.

6 LOADING

Procedures and provisions for loading and securing the load in the helicopter.

7 FLIGHT PLANNING

7.1 Data and instructions necessary for preflight and in-flight planning. Where

applicable, procedures for engine(s) out operations and flights to isolated heliports must be included.

7.2 The method for calculating fuel needed for the various stages of flight, in accordance with BCAR-OPS 3.255.

8 CONFIGURATION DEVIATION LIST

The Configuration Deviation List(s) (CDL), if provided by the manufacturer, taking account of the helicopter types and variants operated including procedures to be followed when a helicopter is being dispatched under the terms of its CDL.

9 MINIMUM EQUIPMENT LIST

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

10 SURVIVAL AND EMERGENCY EQUIPMENT INCLUDING OXYGEN

10.1 A list of the survival equipment to be carried for the routes to be flown and the procedures for checking the serviceability of this equipment prior to take-off. Instructions regarding the location, accessibility and use of survival and emergency equipment and its associated check list(s) must also be included.

10.2 The procedure for determining the amount of oxygen required and the quantity that is available. The flight profile and number of occupants.

11 EMERGENCY EVACUATION PROCEDURES

11.1 Instructions for preparation for emergency evacuation including crew co-ordination and emergency station assignment.

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

12 HELICOPTER SYSTEMS

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

C ROUTE AND HELIPORT INSTRUCTIONS AND INFORMATION

1 Instructions and information relating to communications, navigation and heliport including minimum flight levels and altitudes for each route to be flown and operating minima for each heliport planned to be used, including:

(a) Minimum flight level/altitude;

(b) Operating minima for departure, destination and alternate aerodromes;
(c) Communication facilities and navigation aids;

(d) FATO/runway data and heliport facilities;

(e) Approach, missed approach and departure procedures including noise abatement procedures;

(f) COM-failure procedures;

(g) Search and rescue facilities in the area over which the helicopter is to be flown;

(h) A description of the aeronautical charts that must be carried on board in relation to the type of flight and the route to be flown, including the method to check their validity;

(i) Availability of aeronautical information

and MET services;

(j) En-route COM/NAV procedures.

(k) Intentionally left blank

(l) Special heliport limitations (performance operating etc.).

D TRAINING

1 Training syllabus and checking programs for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight.

2 Training syllabus and checking programs must include:

2.1 For flight crew. All relevant items prescribed in BCAR-OPS 3 Subparts E and N;

2.2 For cabin crew. All relevant items prescribed in Subpart O;
2.3 For operations personnel concerned, including crew members:

(a) All relevant items prescribed in BCAR-OPS 3 Subpart R (Transport of Dangerous Goods by Air); and

(b) All relevant items prescribed in BCAR-OPS 3, Subpart S (Security).

2.4 For operations personnel other than crew members (e.g. dispatcher, handling personnel etc.).

All other relevant items prescribed in BCAR-OPS pertaining to their duties.

3 Procedures

3.1 Procedures for training and checking.

3.2 Procedures to be applied in the event that personnel do not achieve or maintain the required standards.

3.3 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 commercial air transportation flights.

4 Description of documentation to be stored and storage periods. (See Appendix 1 to BCAR-OPS 3.1065.)

Appendix 1 to BCAR-OPS 3.1065 - Document storage periods

An operator shall ensure that the following information/documentation is stored in an acceptable form, accessible to the Department of Civil Aviation, for the periods shown in the Tables below.

Note: Additional information relating to maintenance records is prescribed in Subpart M.

Table 1 - Information used for the preparation and execution of a flight

Information used for the preparation and execution of the flight as described in BCAR-OPS 3.135	
Operational flight plan	3 months
Helicopter Technical or Maintenance Log	24 months after the date of the last entry
Route specific NOTAM/AIS briefing documentation if edited by the operator	3 months
Mass and balance documentation	3 months
Notification of special loads including dangerous goods	3 months

Table 2 - Reports

Reports	
Journey Log	3 months
Flight report(s) for recording details of any occurrence, as prescribed by BCAR-OPS 3.420, or any event which the commander deems necessary	3 months
Reports on exceedance of duty and/or reducing rest periods	3 months

Table 3 - Flight crew records

Flight Crew Records	
Flight, Duty and Rest time	15 months
License	As long as the flight crew member is exercising the privileges of the license for the operator
Conversion training and checking	3 years
Command course (including checking)	3 years
Recurrent training and checking	3 yeas
Training and checking to operate in either pilot's seat	3 years
Recent experience (BCAR-OPS 3.970 refers)	15 months
Route and heliport competence (qualification) (BCAR-OPS 3.975 refers)	3 years
Training and qualification for specific operations when required by BCAR-OPS (e.g. HEMS CAT II/III operations)	3 years
Dangerous Goods training as appropriate	3 years

Table 4 - Cabin crew records

Cabin Crew Records	
Flight, Duty and Rest time	15 months
Initial training, conversion and difference	As long as the cabin crew member is employed

training (including checking)	by the operator
Recurrent training and refresher (including checking)	Until 12 months after the cabin crew member has left the employment of the operator
Dangerous Goods training as appropriate	3 years

Table 5 - Records for other operations personnel

Records for other operations personnel	
Training/Qualification records of other personnel for whom an approved training program is required by BCAR-OPS	Last 2 training records

Table 6 - Other records

Other records	
Quality System records	5 years

SUBPART - Q FLIGHT AND DUTY TIME LIMITATIONS AND REST REQUIREMENTS

BCAR-OPS 3.1080 APPLICABILITY.

a) Certificate holders must assure that flight crewmembers, cabin crewmembers, dispatchers and maintenance personnel are programmed in such a way that the flight time limitations established are not exceeded.

b) Terminology used in this chapter.

Duty period means the period of elapsed time between one hour from reporting for an assignment involving flight time and 30 minutes after being release from that assignment by the certificate holder.
Rest period: means the period free of all restraint or duty for a certificate holder.
Deadhead: Time spent in deadhead transportation to or from duty assignment is not considered to be a part of a rest period.
Flight time: means time that commences when an aircraft moves under its own power for the purpose of flight and ends when the aircraft comes to rest after landing.
Calendar day means the period of elapsed time, using Coordinated Universal Time or local time that begins at midnight and ends 24 hours later at the next midnight.

c) The certificate holders may program one or more flight operations or duty time to his crewmembers as long as the accumulated flight time , wait time, deadhead transportation, or any other activity do not exceed the duty time established in this chapter.

d) When a series of flights are assigned to a crewmember, the waiting time at the base between legs of different number should not exceed three hours, if the waiting time exceeds three hours then there must be a crew change.

BCAR-OPS 3.1085 FLIGHT TIME LIMITATIONS: One or two pilot crews

a) A certificate holder conducting flag operations may schedule a pilot to fly in an airplane that has a crew of one or two pilots for eight hours or less during any 24 consecutive hours without a rest period during these eight hours.

b) If a certificate holder schedules a pilot to fly more than eight hours during any 24 consecutive hours, it shall give him an intervening rest period, at or before the end of eight scheduled hours of flight duty. This rest period must be at least twice the number of hours flown since the preceding rest period, but not less than eight hours. The certificate holder shall relieve that pilot of all duty with it during that rest period.

c) Each pilot who has flown more than eight hours during 24 consecutive hours must be given at least 18 hours of rest before being assigned to any duty with the certificate holder.

d) No pilot may fly more than 32 hours during any seven consecutive days, and each pilot must be relieved from all duty for at least 1 calendar day during any seven consecutive days, this rest period must be given at the pilot's base.
e) No pilot may fly as a member of a crew more than 100 hours during any one calendar month.

f) No pilot may fly as a member of a crew more than 1,000 hours during any 12 calendar month period.

BCAR-OPS 3.1090 FLIGHT TIME LIMITATIONS: Two pilots and one additional flight crewmember.

a) No certificate holder may schedule a pilot to fly, in an airplane that has a crew of two pilots and at least one additional flight crewmember, for a total of more than 12 hours during any 24 consecutive hours.

b) If a pilot has flown 20 or more hours during any 48 consecutive hours or 24 or more hours during any 72 consecutive hours, he must be given at least 18 hours of rest before being assigned to any duty with the air carrier. In any case, he must be given at least 1 calendar day during any seven consecutive days.

c) No pilot may fly as a flight crewmember more than:

120 hours during any 30 consecutive days;
300 hours during any 90 consecutive days;
or
1,000 hours during any 12 calendar month period.

BCAR-OPS 3.1095 FLIGHT TIME LIMITATIONS: Three or more pilots and an additional flight crewmember.

a) Each certificate holder shall schedule its flight hours to provide adequate rest periods on the ground for each pilot who is away from his base and who is a pilot on an airplane that has a crew of three or more pilots and an additional flight crewmember. It shall also provide adequate sleeping quarters on the airplane whenever a pilot is scheduled to fly more than 12 hours during any 24 consecutive hours.

b) The certificate holder shall give each pilot, upon return to his base from any flight or series of flights, a rest period that is at least twice the total number of hours he flew since the last rest period at his base. During the rest period required by this paragraph, the air carrier may not require him to perform any duty for it. If the required rest period is more than seven days, that part of the rest period in excess of seven days may be given at any time before the pilot is again scheduled for flight duty on any route.

c) No pilot may fly as a flight crewmember more than:

350 hours during any 90 consecutive days;
or
1,000 hours during any 12 calendar month period.

BCAR-OPS 3.1100 FLIGHT TIME LIMITATIONS: Pilots not regularly assigned.

a) Except as provided in paragraphs (b) through (e) of this section, a pilot who is not regularly assigned as a flight crewmember for an entire calendar month under sections OPS 3.1090 or OPS 3.1095 may not fly more than 100 hours in any 30 consecutive days.

b) The monthly flight time limitations for a pilot who is scheduled for duty aloft for more than 20 hours in two pilot crews in any calendar month, or whose assignment in such a crew is interrupted more than once in that calendar month by assignment to a crew consisting of two or more pilots and an additional flight crewmember, are those set forth in section OPS 3.1085.

c) Except for a pilot covered by paragraph (b) of this section, the monthly and quarterly flight time limitations for a pilot who is scheduled for duty aloft for more than 20 hours in two pilot and additional flight crewmember crews in any calendar month, or whose assignment in such a crew is interrupted more than once in that calendar month by assignment to a crew consisting of three pilots and additional flight crewmember, are those set forth in section OPS 3.1090.

d) The quarterly flight time limitations for a pilot to whom paragraphs (b) and (c) of this section do not apply and who is scheduled for duty aloft for a total of not more than 20 hours within any calendar month are those set forth in OPS 3.1095.

e) The monthly and quarterly flight time limitations for a pilot assigned to each of two pilot, two pilot and additional flight crewmember, and three pilot and additional

flight crewmember crews in a given calendar month, and who is not subject to paragraph (b), (c), or (d) of this section, are those set forth in OPS 3.1090.

BCAR-OPS 3.1105 FLIGHT TIME LIMITATIONS: Other commercial flying.

No pilot that is employed as a pilot by a certificate holder may do any other commercial flying if that commercial flying plus his flying in air transportation will exceed any flight time limitation in this part.

BCAR-OPS 3.1110 FLIGHT TIME LIMITATIONS: Deadhead transportation.

Time spent in deadhead transportation to or from duty assignment is not considered to be a part of a rest period, but as duty time.

BCAR-OPS 3.1115 FLIGHT TIME LIMITATIONS: Flight engineers (mechanic on board).

a) In any operation in which one flight engineer or flight navigator is required, the flight time limitations in OPS 3.1090 apply to that flight engineer.
b) In any operation in which more than one flight engineer or flight navigator is required, the flight time limitations in OPS 1.1095 apply to those flight engineers.

BCAR-OPS 3.1117 DUTY TIME LIMITATIONS: Pilots.

The certificate holder:
a) shall not schedule a pilot to serve for periods of duty time greater than 12 consecutive hours, nor will schedule a pilot for more that 14 consecutive hours in the case of two crew pilots.

b) shall not schedule a pilot to serve for periods of duty time greater than 13 consecutive hours, nor will schedule a pilot for more that 15 consecutive hours in the case of three crew pilots.

BCAR-OPS 3.1120 DUTY TIME LIMITATIONS: dispatchers.

a) The certificate holder shall establish the duty time period for a dispatcher in such a way as to allow an adequate familiarization with the existing weather conditions along the proposed route, before dispatching any airplane.

The dispatcher must be on duty until each airplane dispatched by him completes its flight or fly beyond his jurisdiction, or is relived by another qualified dispatcher.
b) Except in an emergency, due to circumstances beyond the control:

No certificate holder may schedule a dispatcher for more than 10 consecutive hours of duty time.
If a dispatcher is schedule for more than 10 hours of duty time during any 24 consecutive hours, the certificate holder provide a rest period of at least 8 hours. All dispatchers must be relieved of any duty for at least 1 calendar day in any 7 consecutive days.

c) Notwithstanding paragraphs a), and b) of this section, a certificate holder may schedule, prior BDCA approval a dispatcher for more that 10 hours of duty time in a period of 24 consecutive hours, if the dispatcher is relieved from duty time for at least 8 hours within the 24 consecutive hours period.

BCAR-OPS 3.1125 CABIN CREW MEMBERS: Flight time, Duty time, and rest requirements.

A certificate holder shall not assign duties to a person as cabin crewmember , unless in compliance with the following flight, duty time, and rest requirements:

a) the schedule duty time may not be greater than 12 hours.

b) When the schedule duty time is 12 hours or less the required rest period will be 9 hour, except what is established in paragraph c) of this section. The rest period will be scheduled between the final schedule service, and the next schedule service.

c) The required rest period may be scheduled or reduced to 8 consecutive hours, if the crewmember is provided with 10 consecutive hours of rest. This subsequent rest period must be schedule to begin no later than 24 hours after the beginning of the reduced rest period, and must be scheduled between the final schedule service, and the next schedule service.

d) A certificate holder may assign a duty period greater than 12 hours , but not greater than 14 hours, if for the conduction of the flight or series of flights the certificate holder assigns and schedules an additional cabin crewmember to the minimum required. This must be approved by BDCA and be part of the Operation Specifications.
e) The certificate holder must relieve the cabin crewmembers of any duty for at least 1 calendar day within any 7 consecutive days.

f) The flight time limitation may not be grater than 12 hours.

BCAR-OPS 3.1130 MAINTENANCE PERSONNEL: Duty time limitations.

The maintenance personnel for the certificate holder, or whoever undertakes maintenance to his airplanes, will be relieved from any duty time for at least 1 calendar day in any 7 consecutive days.

SUBPART - R TRANSPORT OF DANGEROUS GOODS BY AIR

BCAR-OPS 3.1150 - Terminology

(a) Terms used in this Subpart have the following meanings:

(1) Acceptance Check List. A document used to assist in carrying out a check on the external appearance of packages of dangerous goods and their associated documents to determine that all appropriate requirements have been met.

(2) Cargo Aircraft. Any aircraft, which is carrying goods or property but not passengers. In this context the following are not considered to be passengers:

(i) A crew member;

(ii) An operator's employee permitted by, and carried in accordance with, the instructions contained in the Operations Manual;

(iii) An authorized representative of an Department of Civil Aviation; or

(iv) A person with duties in respect of a particular shipment on board.

(3) Dangerous Goods Accident. An occurrence associated with and related to the transport of dangerous goods, which results in fatal or serious injury to a person or major property damage.

(4) Dangerous Goods Incident. An occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods, not necessarily occurring on board an aircraft, which results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods, which seriously jeopardizes the aircraft or its occupants, is also deemed to constitute a dangerous goods incident.

(5) Dangerous Goods Transport Document. A document, which is specified by the

Technical Instructions. It is completed by the person who offers dangerous goods for air transport and contains information about those dangerous goods. The document bears a signed declaration indicating that the dangerous goods are fully and accurately described by their proper shipping names and UN numbers (if assigned) and that they are correctly classified, packed, marked, labelled and in a proper condition for transport.

(6) Freight Container. A freight container is an article of transport equipment for radioactive materials, designed to facilitate the transport of such materials, either packaged or unpackaged, by one or more modes of transport.
(7) Handling Agent. An agency, which performs on behalf of the operator some or all of the latter's functions including receiving, loading, unloading, transferring or other processing of passengers or cargo.

(8) Overpack. An enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage.

(9) Package. The complete product of the packing operation consisting of the packaging and its contents prepared for transport.

(10) Packaging. Receptacles and any other components or materials necessary for the receptacle to perform its containment function and to ensure compliance with the packing requirements.

(11) Proper Shipping Name. The name to be used to describe a particular article or substance in all shipping documents and notifications and, where appropriate, on packaging.

(12) Serious Injury. An injury which is sustained by a person in an accident and which:

(i) Requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or

(ii) Results in a fracture of any bone (except simple fractures of fingers, toes or nose); or

(iii) Involves lacerations which cause severe hemorrhage, nerve, muscle or tendon damage; or

(iv) Involves injury to any internal organ; or

(v) Involves second or third degree bums, or any burns affecting more than 5% of the body surface; or

(vi) Involves verified exposure to infectious substances or injurious radiation.

(13) State of Origin. The State in whose territory the dangerous goods were first loaded on an aircraft.

(14) Technical Instructions. The latest effective edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284AN/905), including the Supplement and any Addendum, approved and published by decision of the Council of the International Civil Aviation Organization.

(15) UN Number. The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods to identify a substance or a particular group of substances.

BCAR-OPS 3.1155 - Approval to transport Dangerous Goods

An operator shall not transport dangerous goods unless approved to do so by the Department of Civil Aviation.

BCAR-OPS 3.1160 - Scope

(a) An operator shall comply with the provisions contained in the BCAR 18 on all occasions when dangerous goods are

carried, irrespective of whether the flight is wholly or partly within or wholly outside the territory of a Belize.

(b) Articles and substances which would otherwise be classed as dangerous goods are excluded from the provisions of this Subpart, to the extent specified in the Technical Instructions, provided:

(1) They are required to be aboard the helicopter in accordance with the relevant BCARs or for operating reasons.

(2) They are carried as catering or cabin service supplies;

(3) They are carried for use in flight as veterinary aid or as a humane killer for an animal;

(4) They are carried for use in flight for medical aid for a patient, provided that:

(i) Gas cylinders have been manufactured specifically for the purpose of containing and transporting that particular gas;

(ii) Drugs, medicines and other medical matter are under the control of trained personnel during the time when they are in use in the helicopter;

(iii) Equipment containing wet cell batteries is kept and, when necessary secured, in an upright position to prevent spillage of the electrolyte; and
(iv) Proper provision is made to stow and secure all the equipment during take-off and landing and at all other times when deemed necessary by the commander in the interests of safety; or

(5) They are carried by passengers or crew members.

(c) Articles and substances intended as replacements for those in (b)(1) above shall be transported on a helicopter as specified in the Technical Instructions.

BCAR-OPS 3.1165 - Limitations on the transport of Dangerous Goods

(a) An operator shall take all reasonable measures to ensure that articles and substances that are specifically identified by name or generic description in the Technical Instructions as being forbidden for transport under any circumstances are not carried on any helicopter.

(b) An operator shall take all reasonable measures to ensure that articles and substances or other goods that are identified in the Technical Instructions as being forbidden for transport in normal circumstances are only transported when:

(1) They are exempted by the States concerned under the provisions of the Technical Instructions; or

(2) The Technical Instructions indicate they may be transported under an approval issued by the State of Origin.

BCAR-OPS 3.1170 - Classification

An operator shall take all reasonable measures to ensure that articles and substances are classified as dangerous goods as specified in the Technical Instructions.

BCAR-OPS 3.1175 - Packing

An operator shall take all reasonable measures to ensure that dangerous goods are packed as specified in the Technical Instructions or in a way, which will provide an equivalent level of safety subject to the approval of the Department of Civil Aviation..

BCAR-OPS 3.1180 - Labelling and Marking

(a) An operator shall take all reasonable measures to ensure that packages, overpacks and freight containers are labelled as specified in the Technical

Instructions.

(b) An operator shall take all reasonable measures to ensure packages, overpacks and freight containers are marked as specified in the Technical Instructions or as specified by the Department of Civil Aviation.

(c) Where dangerous goods are carried on a flight, which takes place wholly or partly outside the territory of Belize, labelling and marking, must be in the English language in addition to any other language requirements.

BCAR-OPS 3.1185 - Dangerous Goods Transport Document

(a) An operator shall ensure that, except when otherwise specified in the Technical Instructions, dangerous goods are accompanied by a dangerous goods transport document.

(b) Where dangerous goods are carried on a flight, which takes place wholly or partly outside the territory of Belize, the English language, must be used for the dangerous goods transport document in addition to any other language requirements.

BCAR-OPS 3.1190

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BCAR-OPS 3.1195 - Acceptance of Dangerous Goods

(a) An operator shall not accept dangerous goods for transport until the package, overpack or freight container has been inspected in accordance with the acceptance procedures in the Technical Instructions.

(b) An operator or his handling agent shall use an acceptance check list. The acceptance check list shall allow for all relevant details to be checked and shall be in such form as will allow for the recording of the results of the acceptance check by manual, mechanical or computerized means.

BCAR-OPS 3.1200 - Inspection for damage, leakage or contamination

(a) An operator shall ensure that:

(1) Packages, overpacks and freight containers are inspected for evidence of leakage or damage immediately prior to loading on a helicopter, as specified in the Technical Instructions;

(2) Leaking or damaged packages, overpacks or freight containers are not loaded on a helicopter;

(3) Any package of dangerous goods found on a helicopter and which appears to be damaged or leaking is removed or arrangements made for its removal by an appropriate authority or organization. In this case the remainder of the consignment shall be inspected to ensure it is in a proper condition for transport and that no damage or contamination has occurred to the helicopter or its load; and

(4) Packages, overpacks and freight containers are inspected for signs of damage or leakage upon unloading from a helicopter and, if there is evidence of damage or leakage, the area where the dangerous goods were stowed is inspected for damage or contamination.

BCAR-OPS 3.1205 - Removal of contamination

(a) An operator shall ensure that:

(1) Any contamination found as a result of the leakage or damage of dangerous goods is removed without delay; and

(2) A helicopter which has been contaminated by radioactive materials is

immediately taken out of service and not returned until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions.

BCAR-OPS 3.1210 - Loading Restrictions

(a) Passenger Cabin, Flight Deck and Cargo Compartments. An operator shall ensure that dangerous goods are loaded, segregated, stowed, secured and carried in a helicopter as specified in the Technical Instructions or as approved by the Department of Civil Aviation.

(b) Dangerous Goods Designated for Carriage Only on Cargo Aircraft. An operator shall ensure that packages of dangerous goods bearing the 'Cargo Aircraft Only' label are carried on a cargo aircraft and loaded as specified in the Technical Instructions.

BCAR-OPS 3.1215 - Provision of Information

(a) Information to Ground Staff. An operator shall ensure that:

(1) Information is provided to enable ground staff to carry out their duties with regard to the transport of dangerous goods, including the actions to be taken in the event of incidents and accidents involving dangerous goods; and

(2) Where applicable, the information referred to in sub-paragraph (a)(1) above is also provided to his handling agent.

(b) Information to Passengers and Other Persons.

(1) An operator shall ensure that information is promulgated as required by the Technical Instructions so that passengers are warned as to the types of goods which they are forbidden from transporting aboard a helicopter; and

(2) An operator and, where applicable, his handling agent shall ensure that notices are provided at acceptance points for cargo giving information about the transport of dangerous goods.

(c) Information to Crew Members. An operator shall ensure that information is provided in the Operations Manual to enable crew members to carry out their responsibilities in regard to the transport of dangerous goods, including the actions to be taken in the event of emergencies arising involving dangerous goods.

(d) Information to the Commander. An operator shall ensure that the commander is provided with written information, as specified in the Technical Instructions.

(e) Information in the Event of a helicopter Incident or Accident.

(1) The operator of a helicopter, which is involved in a helicopter incident, shall, on request, provide any information required to minimize the hazards created by any dangerous goods carried.

(2) The operator of a helicopter, which is involved in a helicopter accident, shall, as soon as possible, inform the appropriate Department of Civil Aviation of the State in which the helicopter accident occurred of any dangerous goods carried.

BCAR-OPS 3.1220 - Training programs

(a) An operator shall establish and maintain staff training programs, as required by the Technical Instructions, which must be approved by the Department of Civil Aviation.

(b) Operators not holding a permanent approval to carry dangerous goods. An operator shall ensure that:

(1) Staff who are engaged in general cargo handling have received training to carry out

their duties in respect of dangerous goods. As a minimum this training must cover the areas identified in Column 1 of Table 1 and be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and how to identify such goods; and

(2) The following personnel:

(i) Crew members;

(ii) Passenger handling staff; and

(iii) Security staff employed by the operator who deal with the screening of passengers and their baggage, have received training which, as a minimum, must cover the areas identified in Column 2 of Table 1 and be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify them and what requirements apply to the carriage of such goods by passengers.

Table 1

AREAS OF TRAINING	1	2
General philosophy	X	X
Limitations on Dangerous Goods in air transport	X	X
Package marking and labelling	X	X
Dangerous Goods in passengers baggage		X
Emergency procedures		X

Note: 'X' indicates an area to be covered.

(c) Operators holding a permanent approval to carry dangerous goods. An operator shall ensure that:

(1) Staff who are engaged in the acceptance of dangerous goods have received training and are qualified to carry out their duties. As a minimum this training must cover the areas identified in Column 1 of Table 2 and be to a depth sufficient to ensure the staff can take decisions on the acceptance or refusal of dangerous goods offered for carriage by air;

(2) Staff who are engaged in ground handling, storage and loading of dangerous goods have received training to enable them to carry out their duties in respect of dangerous goods. As a minimum this training must cover the areas identified in Column 2 of Table 2 and be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify such goods and how to handle and load them;

(3) Staff who are engaged in general cargo handling have received training to enable them to carry out their duties in respect of dangerous goods. As a minimum this training must cover the areas identified in Column 3 of Table 2 and be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify such goods and how to handle and load them;

(4) Flight crew members have received training which, as a minimum, must cover the areas identified in Column 4 of Table 2. Training must be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and how they should be carried on a helicopter; and

(5) The following personnel:

(i) Passenger handling staff;

(ii) Security staff employed by the operator who deal with the screening of passengers and their baggage; and

(iii) Crew members other than flight crew members, have received training which, as a minimum, must cover the areas identified in Column 5 of Table 2. Training must be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and what requirements apply to the carriage of such goods by passengers or, more generally, their carriage on a helicopter.

Table 2

AREAS OF TRAINING	1	2	3	4	5
General philosophy	X	X	X	X	X
Limitations on Dangerous Goods in the air transport	X	X	X	X	X
Classification and list of Dangerous Goods	X	X		X	
General packing requirements and Packing Instructions	X				
Packing specifications markings	X				
Package marking and labelling	X	X	X	X	X
Documentation from the shipper	X				
Acceptance of Dangerous Goods, including the use of a checklist	X				
Loading, restrictions on loading and segregation	X	X	X	X	
Inspections for damage or leakage and decontamination procedures	X	X			
Provision of information to the commander	X	X		X	
Dangerous Goods in passengers´ baggage	X			X	X
Emergency procedures	X	X		X	X

Note: 'X' indicates an area to be covered.

(d) An operator shall ensure that all staff who require dangerous goods training receive recurrent training at intervals of not longer than 2 years.

(e) An operator shall ensure that records of dangerous goods training are maintained for all staff trained in accordance with sub-paragraph (d) above.

(f) An operator shall ensure that his handling agent's staff are trained in accordance with the applicable column of Table 1 or Table 2.

BCAR-OPS 3.1225 - Dangerous Goods Incident and Accident Reports

An operator shall report dangerous goods incidents and accidents to the Department of Civil Aviation. An initial report shall be dispatched within 72 hours of the event unless exceptional circumstances prevent this.

BCAR-OPS 3.1230

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SUBPART - S SECURITY

BCAR-OPS 3.1235 - Security requirements

An operator shall ensure that all appropriate personnel are familiar, and comply, with the relevant requirements of the national security programs of Belize.

BCAR-OPS 3.1240 - Training programs

An operator shall establish, maintain and conduct approved training programs which enable the operator's personnel to take appropriate action to prevent acts of unlawful interference such as sabotage or unlawful seizure of helicopters and to minimize the consequences of such events should they occur.

BCAR-OPS 3.1245 - Reporting acts of unlawful interference

Following an act of unlawful interference on board a helicopter the commander or, in his absence the operator, shall submit, without delay, a report of such an act to the Department of Civil Aviation.

BCAR-OPS 3.1250 - Helicopter search procedure checklist

An operator shall ensure that all helicopters carry a checklist of the procedures to be followed for that type in searching for concealed weapons, explosives, or other dangerous devices.

BCAR-OPS 3.1255 - Flight crew compartment security

If installed, the flight crew compartment door on all helicopters operated for the purpose of carrying passengers shall be capable of being locked from within the compartment in order to prevent unauthorized access.

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