PART OPS 3
Commercial Air Transportation(Helicopters)

This new part of Jordanian Civil Aviation Regulations is hereby adopted under the authority and provisions of the Civil Aviation Law N0. (41) dated 2007.

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Revision Control Sheet

Amendment No.	Effective Date	Subpart	Paragraph
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SUBPART- A

APPLICABILITY

Subpart –B

GENERAL

SUBPART-C
OPERATOR CERTIFICATION AND SUPERVISION

SUBPART –D
OPERATIONAL PROCEDURES

SUBPART- E
ALL WEATHER OPERATIONS

SUBPART- F
PERFORMANCE GENERAL

SUBPART- G
PERFORMANCE CLASS 1

SUBPART-H
PERFORMANCE CLASS 2

SUBPART- I
PERFORMANCE CLASS 3

SUBPART -J
MASS AND BALANCE

SUBPART- K
INSTRUMENTS AND EQUIPMENT

SUBPART- L
COMMUNICATION AND NAVIGATION EQUIPMENT

SUBPART- M
HELICOPTER MAINTENANCE

SUBPART- N
FLIGHT CREW

SUBPART-O
CREW MEMBERS OTHER THAN FLIGHT CREW

SUBPART -P
MANUALS, LOGS AND RECORDS

SUBPART- Q
FLIGHT AND DUTY TIME LIMITATIONS AND REST REQUIREMENTS

Reserved.

SUBPART -R
TRANSPORT OF DANGEROUS GOODS BY AIR

SUBPART -S
SECURITY

SUBPART -T
AERIAL WORK

SUBPART- A
APPLICABILITY

OPS3.001 Applicability

(See Appendix 1 to OPS3.001)

(a) OPS3 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 in the STATE. OPS3 do not apply:

(1) To helicopters when used in military, customs, police services and search and rescue (SAR); nor

(2) To parachute dropping and firefighting flights, and to associated positioning and return flights in which the only persons carried are those who would normally be carried on parachute dropping or firefighting flights; nor]

(3) To flights immediately before, during, or immediately after an aerial work activity provided these flights are connected with that aerial work activity and in which, excluding crew members, no more than 6 persons indispensable to the aerial work activity are carried.

Subpart- B

GENERAL

OPS3.005 General

(a) An operator shall not operate a helicopter for the purpose of commercial air transportation other than in accordance with OPS3.

(b) An operator shall comply with the applicable retroactive airworthiness requirements for airplanes operated for the purpose of commercial air transportation.

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

(d) All synthetic training devices (STD), such as flight simulators or flight training devices (FTD), replacing an airplane for training and/or checking purposes are to be qualified in accordance with the requirements applicable to synthetic training devices. An operator intending to use such STD must obtain approval from the CARC.

(See Appendix 1 to OPS3.005(c).)

(d) Helicopter Emergency Medical Service (HEMS) operations shall be conducted in accordance with the requirements contained in except for the variations contained in Appendix 1 to OPS3 .005(d) for which a specific approval is required.

(e) Helicopter operations over a hostile environment located outside a congested area shall be conducted in accordance with the requirements contained in OPS3 except for the variations contained in Appendix 1 to OPS3.005(e) for which a specific approval is required. This Appendix does not apply to operations conducted in accordance with Appendix 1 to OPS3.005(d).

(f) Operations with helicopters with a maximum certificated take-off mass (MCTOM) of 3 175 kg or less; with a maximum approved passenger seating configuration (MAPSC) 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 OPS3 except for the variations contained in Appendix 1 to OPS3 .005(f) for which a specific approval is required.

(g) Operations with helicopters with a maximum certificated take-off mass (MCTOM) over 3 175 kg and a maximum approved passenger seating configuration (MAPSC) of 9 or less; by day; over routes navigated by reference to visual landmarks; and conducted within a local and defined geographical area acceptable to CARC, which are intended to start and end at the same location (or at another location acceptable to CARC within the local area) on the same day, shall be conducted in accordance with the requirements contained in OPS3 except for the variations contained in Appendix 1 to OPS3 .005(g) for which a specific approval is required.

(h) Helicopter Hoist Operations shall be conducted in accordance with the requirements contained in OPS3 except for the variations contained in Appendix 1 to OPS3 .005(h) for which a specific approval is required.

(i) Helicopter operations to/from a public interest site shall be conducted in accordance with the requirements contained in OPS3 except for the variations contained in Appendix 1 to OPS3 .005(i) for which a specific approval is required.

(j) Night VFR operations with the aid of Night Vision Imaging Systems (NVIS) shall only be conducted in accordance with OPS3 and procedures contained in the Operations Manual for which a specific approval is required.

OPS3 .010 Exemptions

The Chief Commissioner may exceptionally and temporarily grant an exemption from the provisions of OPS3 when satisfied that there is a need and subject to compliance with any supplementary condition the Chief Commissioner considers necessary in order to ensure an acceptable level of safety in the particular case.

OPS3 .015 Operational Directives

(a) CARC 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 OPS3 .

OPS3 .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.

OPS3 .025 Common Language

(a) An operator must ensure that all crew members can communicate in a common language or other means acceptable to CARC.

(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.

OPS3 .030 Minimum Equipment Lists Operator's Responsibilities

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

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

OPS3 .035 Quality System

(See AMC to OPS3 .035), (See IEM to OPS3 .035)

(a) An operator shall establish one Quality System and designate one Quality Manager to monitor compliance with, and the adequacy of, procedures required to ensure safe operational practices and airworthy helicopters. Compliance monitoring must include a feed-back system to the Accountable Manager (See also OPS3 .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 CARC.

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

(e) Notwithstanding sub-paragraph (a) above, CARC 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.

OPS3 .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) An occurrence reporting scheme to enable the collation and assessment of relevant incident and accident reports in order to identify adverse trends or to address deficiencies in the interests of flight safety. The scheme shall protect the identity of the reporter and include the possibility that reports may be submitted anonymously (See AC OPS3 .037(a)(2).); and

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

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

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

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

OPS3 .040 Additional crew members

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

OPS3 .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.

OPS3 .055 Information on emergency and survival equipment carried

An operator shall ensure that there are available for immediate communication to rescue co-ordination 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.

OPS3 .065 Carriage of weapons of war and munitions of war

(See IEM OPS3 .065)

(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 all States concerned.

(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 States 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.

OPS3 .070 Carriage of sporting weapons and ammunition

(See IEM OPS3 .070)

(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) They are stowed in the helicopter in a place which is inaccessible to passengers during flight unless CARC has determined that compliance is impracticable and has accepted that other procedures might apply; and

(2) In the case of firearms or other weapons that can contain ammunition, unloaded.

(c) Ammunition for sporting weapons may be carried in passengers' checked baggage, subject to certain limitations, in accordance with the Technical Instructions (see OPS3 .1160(b)(5)) as defined in OPS3.1150(a)(14).

OPS3 .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.

OPS3 .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, certified, described, packaged, marked, labeled and in a fit condition for transport as required by the Technical Instructions.

OPS3 .085 Crew responsibilities.

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

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

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

(b) A crew member shall:

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

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

(3) Make use of the operator's occurrence reporting scheme in accordance with OPS3 .037(a)(2). In all such cases, a copy of the report(s) shall be communicated to the commander concerned.

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

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

(1) While under the influence of any drug or psychoactive substances that may affect his faculties in a manner contrary to safety, see also FCL 3 (medical) ;

(2) Until a reasonable time period has elapsed after deep water diving;

(3) Following blood donation except when a reasonable time period has elapsed;

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

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

(e) A crew member shall not:

(1) Consume alcohol less than 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.

(f) 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 un-serviceabilities allowed by the Configuration Deviation List (CDL) or Minimum Equipment List (MEL); and

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

(g) 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.

OPS3 .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.

OPS3 .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 CARC 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 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 to the cockpit shall be the responsibility of the commander.

OPS3 .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.

OPS3 .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.

OPS3 .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.

OPS3 .120 Endangering safety

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

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

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

OPS3 .125 Documents to be carried

(See AC OPS3 .125)

(a**)** An operator shall ensure that the following are carried on each flight:

(1) The Certificate of Registration;

(2) The Certificate of Airworthiness;

(3) The original or copy of the Noise Certificate (if applicable);

(4) The original or copy of the Air Operator Certificate;

(5) The Aircraft Radio License; and

(6) The original or copy of the Third party liability Insurance Certificate(s).

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

OPS3 .130 Manuals to be carried

(a) An operator shall ensure that:

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

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

(3) The current Helicopter Flight Manual is carried in the helicopter unless CARC has accepted that the Operations Manual prescribed in OPS3 .1045, Appendix 1, PART B, contains relevant information for that helicopter.

OPS3.135 Additional information and forms to be carried

(a) An operator shall ensure that, in addition to the documents and manuals prescribed in OPS3.125 and OPS3.130, 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 OPS3.1060;

(2) Helicopter Technical Log containing at least the information required in PART-M - M.A.306 Operator's technical log system;

(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 OPS3 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 OPS3.1215(d);

(9) Current maps and charts and associated documents as prescribed in OPS3.290(b)(7);

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

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

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

OPS3.140 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 until it has been duplicated at the place at which it will be stored in accordance with OPS3.1065; or, if this is impracticable,

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

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

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

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

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

(4) Mass and balance documentation if required (OPS3.625 refers); and

(5) Special loads notification.

OPS3.145 Power to inspect

An operator shall ensure that any person authorized by CARC is permitted at any time to board and fly in any helicopter operated in accordance with an AOC issued by CARC 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.

OPS3.150 Production of documentation and records

(a) An operator shall:

(1) Give any person authorized by CARC 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 CARC, 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 CARC, produce to that person the documentation required to be carried on board.

OPS3.155 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.

OPS3.160 Preservation, production and use of flight recorder recordings

(a) Preservation of recordings (See IEM OPS3.160(a)).

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

(2) Unless prior permission has been granted by CARC, 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 investigating authority.

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

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

(i) Save the recordings for the period of operating time as required by OPS3.715 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 presents the information necessary to retrieve and convert the stored data into engineering units.

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

(iii) At all times preserve a record of not less than one representative flight, that is to say, a recording of a flight made within the last 12 months which includes a take-off, climb, cruise, descent, approach to landing and landing, together with a means of identifying the record with the flight to which it relates.

(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 CARC, produce any recording made by a flight recorder which is available or has been preserved.

(c) Use of recordings

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

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

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

(ii) De-identified; or

(iii) Disclosed under secure procedures.

OPS3.165 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) A Jordanian operator - An operator certificated under JAR OPS 3 by CARC.

(b) Leasing of helicopters between Jordanian operators.

(1) Wet lease-out. Jordanian operator providing a helicopter and complete crew to another Jordanian 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 subparagraph (b)(1) above, a Jordanian Operator utilizing a helicopter from, or providing it to, a Jordanian operator, must obtain prior approval for the operation from CARC. 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 CARC, 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 a Jordanian operator and any entity other than a Jordanian operator:

(1) Dry lease-in:

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

(ii) A Jordanian operator shall ensure that, with regard to helicopters that are dry leased-in, any differences from the requirements prescribed in Subparts K, L, and/or PART-26, are notified to and are acceptable to CARC.

(2) Wet lease-in:

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

(ii) A Jordanian 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 JCAR's;

(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. and

(D) Any requirement made applicable by the lessee's Authority is complied with.

(3) Dry lease-out:

(i) A Jordanian operator 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 Chief Commissioner has exempted the Jordanian Operator from the relevant provisions of OPS3 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.

A Jordanian operator 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 a Jordanian operator 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) CARC is immediately notified of the use of this provision.

OPS3.170 Reserved

Appendix 1 to OPS3.005(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, when the helicopter is operated according to any of the following requirements:

(1) OPS3.517; or

(2) Appendix 1 to OPS3.005(i); or

(3) Appendix 1 to OPS3.005(e).

Appendix 1 to OPS3.005(d) Helicopter Emergency Medical Service

(See ACJ Appendix 1 to OPS3.005(d))

Note: CARC is empowered to decide which operation is a HEMS operation in the sense of this Appendix.

(a) Terminology

(1) 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.

(2) 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 subparagraph (e)(2) below.

(3) 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) Ill or injured persons and other persons directly involved.

(See also ACJ to Appendix 1 to OPS3.005(d), paragraph (a)(4).)

(4) HEMS dispatch centre.

A place where, if established, the coordination or control of the HEMS flight takes place. It may be located in a HEMS Operating Base.

(5) HEMS operating base.

A heliport at which the HEMS crew members and the HEMS helicopter may be on stand-by for HEMS operations.

(6) HEMS operating site.

A site selected by the commander during a HEMS flight for HHO, landing and takeoff. (See ACJ to Appendix 1 to 3.005(d), sub-paragraph 7).

(7) 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. (See ACJ to Appendix 1 to OPS3.005(d) sub-paragraph (b).)

(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 MTOM 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 when the operator holds an Approval to operate under Appendix 1 to OPS3.005(i).

(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 (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. (See ACJ to Appendix 1 to OPS3.005(d) sub-paragraph (c)(2)(i)(B)).

(C) The HEMS operating site must be big enough to provide adequate clearance from all

obstructions. 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. (See ACJ to Appendix 1 to 3.005(d),sub-paragraph (c)(2)(i)(C).)

(D) Guidance on take-off and landing procedures at previously un-surveyed/ HEMS operating sites shall be contained in the Operations Manual.

(ii) Helicopters with a MTOM exceeding 5 700 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 crew members for the HEMS task, taking previous experience into account.

(ii) Experience. The minimum experience level for commanders conducting HEMS flights shall not be less than:

(A) Either:

(A1) 1 000 hours pilot in command of aircraft of which 500 hours is as pilot-in command on helicopters; or

(A2) 1 000 hours as copilot in HEMS operations of which 500 hours is as pilot-in command under supervision; and,

100 hours pilot-in command of helicopters.

(B) 500 hours operating experience in helicopters gained in an operational environment similar to the intended operation (See ACJ to Appendix 1 to OPS3.005(d) sub- paragraph (c)(3)(ii)(B)); and

(C) For pilots engaged in night operations, 20 hours VMC at night as pilot-in-command; and

(D) Successful completion of training in accordance with subparagraph (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 in a synthetic training device (STD) within the last 6 months.

(See ACJ to Appendix 1 to OPS3.005(d) subparagraph (c)(3)(iii).)

(iv) Crew composition

(See ACJ to Appendix 1 to OPS3.005(d), subparagraph (c)(3)(iv))

(A) Day flight.

The minimum crew by day shall be one pilot and one HEMS crew member. 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 CARC taking into account the following:

(B1) Adequate ground reference;

(B2) Flight following system for the duration of the HEMS mission (see AMC to Appendix 1 to OPS3.005(d), sub-paragraph (c)(3)(iv)(B)(B2));

(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 is suitably qualified.

Table 1 - HEMS operating minima

1 PILOTS		2 PILOTS	
DAY			
Ceiling	Visibility	Ceiling	Visibility
500 ft and above	(See OPS3.465)	500 ft and above	(See OPS3.465)
499–400 ft	1 000 m (Note 1)	499–400 ft	2 000 m
399–300 ft	2 000 m	399–300 ft	3 000 m
NIGHT			
Cloud base	Visibility	Cloud base	Visibility
1 200 ft (Note 2)	2500 m	1 200 ft (Note 2)	3 000 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. (See AC OPS3.465.)

Note 2: Cloud base may be reduced to 1 000 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. (See AC OPS3.465.)

(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 OPS3 , 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) Refueling with passengers on board.

When the commander considers refueling 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 refueling side of the helicopter shall remain closed;

(ii) Door(s) on the non-refueling 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) OPS3 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 transport may have on the patient sites; and.

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

(ii) OPS3 Subpart N checking with the following additional items:

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

(B) Line checks with special emphasis on the following (See ACJ to Appendix 1 to OPS3.005(d) (e)(1)(ii)(B):

(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 in accordance with the requirements of Subpart O with the following additional items:

(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 equipment;

(viii) Crew coordination;

(ix) Practice of response to HEMS call out;

(x) Conducting refueling and rotors running refueling;

(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 intercommunication 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 (see IEM to Appendix 1 to OPS3.005(d), sub-paragraph (e)(4)):

(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 OPS3.005(e)

Helicopter operations over a hostile environment located outside a congested Area.

(See IEM to Appendix 1 to OPS3.005(e))

(a) Approval.

An operator wishing to conduct operations in accordance with this Appendix must have the prior approval of CARC issuing the AOC and the Authority 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 MAPSC) of 9 or less passengers are exempt from the following requirements of OPS3 , Subpart H:

(1) OPS3.520(a)(2);

(2) OPS3.535(a)(2).

(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 (MAPSC) of 6 or less are exempt from the requirement of OPS3.240(a)(5) provided that the operator complies with Appendix 1 to OPS3.517(a), subparagraphs (a)(2)([i]) & (ii).

(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 OPS3.005(f)

Operations for small helicopters (VFR day only)

(a) Terminology.

(1) Local Operations.

Flight conducted within a local and defined geographical area acceptable to CARC, which start and end at the same location on the same day.

(b) Approval.

An operator wishing to conduct operations in accordance with this Appendix must have the prior approval of CARC issuing the AOC. Such an approval shall specify:

(1) The type of helicopter; and

(2) The type of operation.

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

(see ACJ to Appendix 1 to OPS3.005(f) paragraph (b)(3)).

(c) Prohibition.

The following activities are prohibited:

(1) OPS3.065. Carriage of weapons of war and munitions of war.

(2) OPS3.265. Carriage of inadmissible passengers, deportees or persons in custody.

(3) OPS3.305. Refueling/ defueling with passengers embarking, on board or disembarking.

(4) OPS3.335. Smoking on board.

(d) Alleviation.

The following rules are alleviated:

(1) OPS3.100 Admission to cockpit:

(i) An operator must establish rules for the carriage of passengers in a pilot seat, if applicable.

(ii) The commander must ensure that:

(A) carriage of passengers in the pilot seat does not cause distraction and/or interference with the flight's operation; and

(B) the passenger occupying a pilot seat is made familiar with the relevant restrictions and safety procedures.

(2) OPS3.135 Additional information and forms to be carried.

(i) For local operations the following documents need not be carried:

(A) OPS3.135(a)(1) -Operational Flight Plan

(B) OPS3.135(a)(2) -Technical Log (except where required for land-away)

(C) OPS3.135(a)(4) -Notam/AIS documentation

(D) OPS3.135(a)(5) -Meteorological information

(E) OPS3.135(a)(7) -Notification of special passengers, etc.

(F) OPS3.135(a)(8) -Notification of special loads, etc.

(ii) For non-local operations:

(A) OPS3.135(a)(1) -Operational Flight Plan.

The flight plan may be in a simplified form, relevant to the kind of operations conducted and acceptable to CARC.

(B) OPS3.135(a)(7) -Notification of special passengers. Is not required.

(3) OPS3.140 Information retained on the ground. Information need not be retained on the ground when other methods of recording are employed.

(4) OPS3.165 Leasing. Applicable only where formal leasing agreement exists.

Note: The case where the contract to carry the passengers are transferred to another operator to whom the passengers will pay for the transport, is not considered as leasing.

(5) OPS3.215 Use of Air Traffic Services.

Not applicable unless mandated by air space requirements and providing search and rescue service arrangements are acceptable to CARC.

(6) OPS3.220 Authorization of Heliports by the operator.

An operator shall establish a procedure to qualify the Commanders for the selection of heliports or landing sites, suitable for the type of helicopter and the type of operation.

(7) OPS3.255 Fuel policy.

Subparagraphs (b) to (d) are not applicable when the fuel policy prescribed in OPS3.255(a) ensures that, on completion of the flight, or series of flights, the fuel remaining is not less than an amount of fuel sufficient for 30 minutes flying time at normal cruising (this may be reduced to 20 minutes when operating within an area providing continuous and suitable precautionary landing sites).

Final reserve fuel must be specified in the operations manual in order to be able to comply with JCAR ops 3.375(c).

(8) OPS3.280 Passenger seating.

Procedures are not required to be established.

Note: The intent of this paragraph is achieved by the pilot using normal judgment.

OPS3.260 is applicable and is considered to address the need for procedures.

(9) OPS3.285 Passenger briefing.

(i) Paragraph (a)(1). Unless to do so would be unsafe, passengers are verbally briefed about safety matters, parts or all of which may be given by an audio-visual presentation. Prior approval must be given for the use of portable electronic devices.

(10) OPS3.290 Flight preparation.

(i) For local operations:

(A) OPS3.290(a). An operational flight plan is not required.

(ii) For non-local operations:

(A) OPS3.290(a). An operational flight plan may be prepared in a simplified form relevant to the kind of operation.

(11) OPS3.375 In-flight fuel management.

Appendix 1 to OPS3.375 need not be applied (see (d)(14) below).

(12) OPS3.385 Use of supplemental oxygen.

With prior approval of CARC, excursions between 10 000 ft and 16 000 ft for a short duration may be undertaken without the use of supplemental

oxygen in accordance with procedures contained in the Operations Manual. (In such circumstances, the operator must ensure that the passengers are informed before departure that supplemental oxygen will not be provided.)

(13) Appendix 1 to OPS3.270 Stowage of baggage and cargo.

As appropriate to the type of operation and helicopter.

(14) Appendix 1 to OPS3.375 In-flight fuel management. Not applicable.

(15) OPS3.630 General Introduction. Instruments and Equipment.

Alternative equipment that does not meet current JTSO standards but does meet the safety standard of the original equipment may be acceptable to CARC.

(16) OPS3.775 Supplemental Oxygen Non pressurized helicopters. With prior approval of CARC, excursions of a short duration between 10 000 ft and 16 000 ft may be undertaken without supplemental oxygen, in accordance with procedures contained in the Operations Manual.

(17) Appendix 1 to OPS3.775 Supplemental oxygen for non-pressurized helicopters. Not applicable in accordance with (12) & (16) above.

(18) OPS3.955(b) Upgrading to Commander. CARC may accept an abbreviated command course relevant to the type of operation to be undertaken.

(19) OPS3.970(a) Recent Experience. As an alternative to the requirement of OPS3.970(a), with prior approval of CARC, the 90 day recency may be satisfied if a pilot has performed 3 takeoffs, 3 circuits and 3 landings on any helicopter in the same designated group in the preceding 90 days (see ACJ to Appendix 1 to OPS3.005(f) paragraph (d)(19)).

The recency qualification for the helicopter type to be operated is conditional upon:

(i) the Type Rating Proficiency Check (TRPC) on the type being valid; and

(ii) the achievement of 2 flying hours on the type or variant within the last 6 months; and

(iii) an OPC being valid on one of the helicopters in the designated group; and

(iv) a strict rotation of OPCs for all helicopters being flown in the designated group; and

(v) the composition of designated groups and the procedure for validation of TRPCs, OPCs and recency, being contained in the operations manual.

(20) Appendix 1 to OPS3.965 Recurrent Training and checking.

A syllabus applicable to the type of operation may be accepted by CARC.

(21) OPS3.1060 Operational flight plan.

See (2)(i)(A) & (2)(ii)(A) above.

(22) OPS3.1235 Security requirements.

Applicable only when operating in the State when the national security program applies to the operations covered in this Appendix.

(23) OPS3.1240 Training programs.

Training programs shall be adapted to the kind of operations performed. A suitable self-study training program may be acceptable to CARC.

(24) OPS3.1250 Helicopter search procedure checklist.

No checklist is required.

Appendix 1 to OPS3.005(g)

Local area operations (VFR day only)

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

(1) The type of helicopter

(2) Type of operation

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

(see ACJ to Appendix 1 to OPS3.005(g) paragraph (a)(3)).

(b) Prohibition.

The following activities are prohibited:

(1) OPS3.065. Carriage of weapons of war and munitions of war.

(2) OPS3.265. Carriage of inadmissible passengers, deportees or persons in custody.

(3) OPS3.305. Refueling/ defueling with passengers embarking, on board or disembarking.

(4) OPS3.335. Smoking on board.

(c) Alleviation.

The following rules are alleviated:

(1) OPS3.135 Additional information and forms to be carried.

(i) OPS3.135(a)(1) Operational Flight Plan. The flight plan may be in a simplified form, relevant to the kind of operations conducted and acceptable to CARC.

(ii) OPS3.135(a)(4) NOTAM /AIS documentation. Are not required.

(iii) OPS3.135(a)(5) Meteorological information. Is not required.

(iv) OPS3.135(a)(7) Notification of special passengers, etc. Is not required.

(v) OPS3.135(a)(8) Notification of special loads, etc. Is not required.

(2) OPS3.140 Information retained on the ground. Information need not be retained on the ground when other methods of recording are employed.

(3) OPS3.165 Leasing. Applicable only where a formal leasing agreement exists.

Note: The case where the contract to carry the passengers are transferred to another operator to whom the passengers will pay for the transport, is not considered as leasing.

(4) OPS3.215 Use of Air Traffic Services. Not applicable unless mandated by air space requirements and providing search and rescue service arrangements are acceptable to CARC.

(5) OPS3.220 Authorization of Heliports by the operator. An operator shall establish a procedure to qualify the Commanders for the selection of heliports or landing sites, suitable for the type of helicopter and the type of operation.

(6) OPS3.255 Fuel policy.

Subparagraphs (b) to (d) are not applicable when the fuel policy prescribed in OPS3.255(a) ensures that, on completion of the flight, or series of flights, the fuel remaining is not less than an amount of fuel sufficient for 30 minutes flying time at normal cruising (this may be reduced to 20 minutes when operating within an area providing continuous and suitable precautionary landing sites). Final reserve fuel must be established in the operations manual in order to be able to comply with OPS3.375(c).

(7) OPS3.290(a). See (C)(1)(i) above.

(8) OPS3.375 In-flight fuel management. Appendix 1 to OPS3.375 need not be applied (see (c)(10) below).

(9) OPS3.385 Use of supplemental oxygen. With prior approval of the authority excursions between 10 000 ft and 13 000 ft for a short duration may be undertaken without the use of supplemental oxygen in accordance with procedures contained in the Operations Manual. (In such circumstances, the operator must ensure that passengers are informed before departure that supplemental oxygen will not be provided.)

(10) Appendix 1 to OPS3.375 In flight fuel management. Not applicable.

(11) OPS3.630 General Introduction. Instruments and Equipment.

Alternative equipment that does not meet current JTSO standards but does meet the safety standard of the original equipment may be acceptable to CARC.

(12) OPS3.775 Supplemental Oxygen - Non pressurized helicopters. With prior approval of CARC, excursions of a short duration between 10 000 ft and 16 000 ft may be undertaken without supplemental oxygen, in accordance with procedures contained in the Operations Manual.

(13) Appendix 1 to OPS3.775 Supplemental oxygen for non-pressurized helicopters. Not applicable in accordance with (9) & (12) above.

(14) OPS3.1060 Operational flight plan. See (C)(1)(i) above.

(15) OPS3.1235 Security requirements. Applicable only in the State when the national security program applies to the operations covered in this Appendix.

Appendix 1 to OPS3.005(h)

Helicopter Hoist Operations (HHO)

Note: CARC is empowered to decide which operation is a HHO operation in the sense of this Appendix.

(a) Terminology

(1) Helicopter Hoist Operations (HHO) Flight.

A flight by a helicopter operating under an HHO approval, the purpose of which is to facilitate the transfer of persons and/or cargo by means of a helicopter hoist.

(2) HHO Crew Member.

A crewmember who performs assigned duties relating to the operation of a hoist.

(3) HHO Offshore.

A flight by a helicopter operating under a HHO approval, the purpose of which is to facilitate the transfer of persons and/or cargo by means of a helicopter hoist from or to a vessel or structure in a sea area.

(4) Hoist Cycle.

For the purpose of the setting of crew qualifications of this appendix; is one down-and-up cycle of the hoist hook.

(5) HHO Site.

A specified area at which a helicopter performs a hoist transfer.

(6) HHO Passenger.

A person who is to be transferred by means of a helicopter hoist.

(b) Operations Manual.

An operator must ensure that the Operations Manual includes a supplement containing material specific to HHO. In particular it will address:

(1) Performance criteria.

(2) If required, the conditions under which offshore HHO transfer may be conducted including the relevant limitations on vessel movement and wind speed.

(3) The weather limitations for HHO.

(4) The criteria for determining the minimum size of the HHO site - appropriate to the task.

(5) The procedures for determining minimum crew.

(6) The method by which crew members record hoist cycles.

When required, relevant extracts from the Operations Manual supplement shall be made available to the organization for which the HHO is being provided.

(c) Maintenance of HHO equipment.

Maintenance instructions for HHO systems must be established by the operator, in liaison with the manufacturer, included in the operator's helicopter maintenance Program prescribed in PART-M –M.A.302 Maintenance Program, and be approved by CARC.

(d) Operating requirements

(1) The Helicopter.

During HHO, the helicopter must be capable of sustaining a critical power unit failure with the remaining engine(s) at the appropriate power setting, without hazard to the suspended person(s)/cargo, third parties, or property.

(Except for HEMS HHO at a HEMS operating site where the requirement need not be applied.)

(2) The Crew.

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

(i) Selection.

The Operations Manual shall contain criteria for the selection of flight crew members for the HHO task, taking previous experience into account.

(ii) Experience.

The minimum experience level for commanders conducting HHO flights shall not be less than:

(A) Offshore:

(A1) 1 000 hours pilot in-command of helicopters or 1 000 hours as co- pilot in HHO operations of which 200 hours is as pilot-in-command under supervision; and

(A2) 50 hoist cycles conducted offshore, of which 20 cycles shall be at night if night operations are being conducted.

(B) Onshore:

(B1) 500 hours pilot in-command of helicopters or 500 hours as co-pilot in HHO operations of which 100 hours is as pilot-in-command under supervision;

(B2) 200 hours operating experience in helicopters gained in an operational environment similar to the intended operation (see IEM to Appendix 1 to OPS3.005(d), paragraph (c)(3)(ii)(B)); and

(B3) 50 hoist cycles, of which 20 cycles shall be at night if night operations are being conducted.

(C) Successful completion of training in accordance with the procedures contained in the Operations Manual and relevant experience in the role and environment under which HHO is conducted.

(iii) Recency. All pilots and HHO crew members conducting HHO shall, in addition to the requirements of OPS3.970(a), have completed in the last 90 days:

(A) When operating by day:

Any combination of 3 day or night hoist cycles, each of which shall include a transition to and from the hover.

(B) When operating by night:3 night hoist cycles, each of which shall include a transition to and from the hover.

(iv) Crew Composition. The minimum crew for day or night operations shall be as stated in the Operations Manual supplement and will be dependent on the type of helicopter, the weather conditions, the type of task, and, in addition for offshore operations, the HHO site environment, the sea state and the movement of the vessel but, in no case will be less than one pilot and one HHO crew member. (See ACJ to Appendix 1 to OPS3.005(h) paragraph (d)(2)(iv).)

(e) Additional Requirements:

(1) HHO Equipment.

The installation of all helicopter hoist equipment including any subsequent modifications and where appropriate, its operation, shall have an airworthiness approval appropriate to the intended function. Ancillary equipment must be designed and tested to the appropriate standard and acceptable to CARC.

(2) Helicopter Communication Equipment.

Radio equipment, in addition to that required by Subpart L, will require airworthiness approval. The following shall require two-way communication with the organization for which the HHO is being provided and, where possible, communication with ground personnel:

(i) Day and night offshore operations; or

(ii) Night onshore operations,

(f) Training and Checking.

(1) Flight Crew Members.

The Flight crew member shall be trained in the following subjects:

(i) Subpart N training with the following additional items:

(A) Fitting and use of the hoist;

(B) Preparing the helicopter and hoist equipment for HHO;

(C) Normal and emergency hoist procedures by day and,

When required, by night;

(D) Crew co-ordination concept specific to HHO;

(E) Practice of HHO procedures; and

(F) The dangers of static electricity discharge.

(ii) Subpart N checking with the following additional items:

(A) Proficiency checks, as appropriate to day operations which must also be conducted by night if such operations are undertaken by the operator. The checks should include procedures likely to be used at HHO sites with special emphasis on:

(A1) Local area meteorology;

(A2) HHO flight planning;

(A3) HHO departures;

(A4) A transition to and from the hover at the HHO site;

(A5) Normal and simulated emergency HHO procedures; and

(A6) Crew co-ordination.

(2) HHO Crew Member.

The HHO crew member shall be trained in accordance with the requirements of Subpart O with the following additional items:

(i) Duties in the HHO role;

(ii) Fitting and use of the hoist;

(iii) Operation of hoist equipment;

(iv) Preparing the helicopter and specialist equipment for HHO;

(v) Normal and emergency procedures;

(vi) Crew co-ordination concepts specific to HHO;

(vii) Operation of intercommunications and radio equipment;

(viii) Knowledge of emergency hoist equipment;

(ix) Techniques for handling HHO passengers;

(x) Effect of the movement of personnel on the centre of gravity and mass during HHO;

(xi) Effect of the movement of personnel on performance during normal and emergency flight conditions;

(xii) Techniques for guiding pilots over HHO sites;

(xiii) Awareness of specific dangers relating to the operating environment; and

(xiv) The dangers of static electricity discharge.

(3) HHO Passengers.

Prior to any HHO flight, or series of flights, HHO passengers shall be briefed and made aware of the dangers of static electricity discharge and other HHO considerations.

Appendix 1 to OPS3.005(i)

Helicopter operations at a public interest site

(a) Approval:

An operator wishing to conduct operations in accordance with this Appendix must have the prior approval of CARC issuing the AOC and the Authority of the State in which it is intended to conduct such operations. Such an approval shall specify:

(1) The public interest site(s) see ACJ to Appendix 1 to 3.005(i) paragraph (a)(1);

(2) The type(s) of helicopter; and

(3) The type of operation.

(b) Terminology

(1) Public interest site:

A site used exclusively for operations in the public interest.

(c) Applicability:

This Appendix shall only be applicable to multi-turbine powered helicopter types, with a maximum approved passenger seating configuration (MAPSC) of six or less, operation to/from public interest sites:

(1) Located in a hostile environment; and,

(2) Which were established as heliports before the 1 of July 2002:

(d) Alleviation:

(1) Operations to/from a public interest site, may be conducted in accordance with Subpart H (Performance Class 2) and are exempt from the following requirements:

(i) the requirement of OPS3.520(a)(2); and

(ii) the requirement of OPS3.535(a)(2); provided that the operator has been granted a relevant approval by CARC (See Appendix 1 to OPS3.517(a) subparagraphs (a)(2)([i]) and (ii).

(2) Where the size of the public interest site or its obstacle environment does not allow the helicopter to be operated in accordance with Subpart G (Performance Class 1), the exemption specified in sub-paragraph (d)(1) above may be approved by the provided:

(i) for operations in a non congested hostile environment, the helicopter mass does not exceed the maximum mass specified in the

Helicopter Flight Manual for an AEO OGE hover in still air with all power units operating at an appropriate power rating; and

(ii) for operations in a congested hostile environment, the helicopter mass does not exceed the maximum mass specified in the Helicopter Flight Manual for a climb gradient of 8% in still air; at the appropriate take-off safety speed (Vtoss) with the critical power unit inoperative and the remaining power units operating at an appropriate power rating (See AC to appendix 1 to OPS3.005(i) sub-paragraph (d)(2)).

(e) Operation.

Site specific procedures must be established in the Operations Manual to minimize the period during which there would be danger to helicopter occupants and persons on the surface in the event of a power unit failure during take-off and landing at a public interest site. Part C of the Operations Manual shall contain for each public interest site; a diagram or annotated photograph showing the main aspects, the dimensions, the non-conformance with Subpart G (Performance Class 1), the main risks and the contingency plan should an incident occur.

SUBPART-C

OPERATOR CERTIFICATION AND SUPERVISION

OPS3.175 General rules for Air Operator Certification and Supervision

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 CARC to examine all safety aspects of the proposed operation.

(c) An applicant for an AOC must:

(1) Not hold an AOC issued by another Authority unless specifically approved by CARC concerned;

(2) Have his principal place of business and, if any, his registered office located in the Kingdom of Jordan responsible for issuing the AOC (see IEM OPS3.175(c)(2));

(3) Have registered the helicopters which are to be operated under the AOC in the Kingdom of Jordan responsible for issuing the AOC; and

(4) Satisfy CARC that he is able to conduct safe operations.

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

(e) An operator shall grant CARC access to his organization and helicopters and shall ensure that, with respect to maintenance, access is granted to any associated PART 145 maintenance organization, to determine continued compliance with this OPS3 regulation.

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

(g) The operator must satisfy the Authority that:

(1) Its organization and management are suitable and properly matched to the scale and scope of the operation; and

(2) Procedures for the supervision of operations have been defined.

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

(i) The operator must have nominated post holders, acceptable to CARC, who are responsible for the management and supervision of the following areas,

(1) Flight operations;

(2) The maintenance system;

(3) Crew training; and

(4) Ground operations.

(see ACJ OPS3.175(i)).

(j) A person may hold more than one of the nominated posts if acceptable to CARC but, for operators who employ 21 or more full time staff, a minimum of two persons are required to cover the four areas of responsibility. (See ACJ OPS3.175(j) &(k).)

(k) For operators who employ 20 or less full time staff, one or more of the nominated posts may be filled by the accountable manager if acceptable to CARC. (See ACJ OPS3.175(j) & (k).)

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

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

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

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

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

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

OPS3.180 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 CARC.

(2) The maintenance system has been approved by the CARC in accordance with PART-M; and

(3) He has satisfied CARC that he has the ability to:

(i) Establish and maintain an adequate organization;

(ii) Establish and maintain a quality system in accordance with JCAR 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 OPS3.175(g) to (o); and

(v) Comply with OPS3.175.

(b) Notwithstanding the provisions of OPS3.185(f), the operator must notify CARC as soon as practicable of any changes to the information submitted in accordance with subparagraph OPS3.185(a) below.

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

OPS3.185 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. (see IEM OPS3.185(b)):

(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 PART 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 except that 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) Other than in exceptional circumstances, CARC must be given at least 10 days prior notice of a proposed change of a nominated post holder.

Appendix 1 to OPS3.175

Contents and conditions of the Air Operator

(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 CARC 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).

-Offshore Operations

-HEMS (See Appendix 1 to OPS3.005(d)

-Transportation of Dangerous Goods (See OPS3.1155)

-Helicopter operations over a hostile environment located outside a congested area, (See Appendix 1 to OPS3.005(e)).

-Operations for small helicopters (VFR Day only) (See Appendix 1 to OPS3.005(f)).

-Local Area Operations (VFR Day only) (See Appendix 1 to OPS3.005(g))

-Helicopter Hoist Operations (See Appendix 1 to OPS3.005(h)

-Operations to Public Interest Sites (See Appendix 1 to OPS3.005(i)

-Helicopter operations with an exposure time to a power unit failure during takeoff or landing. (See OPS3.517 and OPS3.540(a)(4).)

Appendix 2 to OPS3.175

The management and organization of an AOC holder:

(a) General:

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 managerial competency together with appropriate technical/operational qualifications (see also AC OPS3.175 (i))] in aviation.

(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 CARC 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) 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 CARC.

(4) Persons nominated as post holders must be contracted to work sufficient hours to fulfill the management functions associated with the scale and scope of the operation.

(c) Adequacy and supervision of staff

(1) Crew members.

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.

(ii) The duties and responsibilities of these supervisors must be defined, and any [other] commitments arranged so that they can discharge their supervisory responsibilities.

(iii) The supervision of crew members and ground staff 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 basis 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

OPS3.195 Operational Control

(See AC OPS3.195)

An operator shall:

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

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

OPS3.200 Operations Manual

An operator shall provide an Operations Manual in accordance with OPS3 , Subpart P for the use and guidance of operations personnel.

OPS3.205 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.

OPS3.210 Establishment of Procedures

(a) An operator shall establish procedures and instructions, for each helicopter type, containing ground staff and crew members' duties for all types of operation on the ground and in flight. (See AMC OPS3.210(a).)

(b) An operator shall establish a checklist system to be used by crew members for all phases of operation with the helicopter under normal, abnormal and emergency conditions as applicable, to ensure that the operating procedures in the Operations Manual are followed (see IEM OPS3.210(b)). The design and utilization of checklists shall observe human factors and CRM principles.

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

(d) An operator shall not permit a helicopter rotor to be turned under power for the purpose of flight without a qualified pilot at the controls (see AC OPS3.210(d)).

OPS3.215 Use of Air Traffic Services

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

OPS3.220 Authorization of Heliports by the Operator

(See AMC OPS3.220)

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

OPS3.225 heliport operating minima

(a) An operator shall specify heliport operating minima, established in accordance with OPS3.430 for each departure, destination or alternate heliport authorized to be used in accordance with OPS3.220.

(b) These minima must take into account any increment to the specified values imposed by CARC.

(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.

OPS3.230 departure and approach procedures

(a) An operator shall use departure and approach procedures if specified by the State in which the heliport is located.

(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 CARC.

OPS3.235 noise abatement p**rocedures**

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

OPS3.240 routes and areas of operations

(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 (OPS3.135(a)(9) refers);

(5) For helicopters operated in Performance Class 3, surfaces are available which permit a safe forced landing to be executed, except when the helicopter has an approval to operate in accordance with Appendix 1 to OPS3.005(e).

(6) For helicopters operated in Performance Class 3 and conducting Coastal Transit operations, PART C of the Operations Manual contains procedures to ensure that the width of the Coastal Corridor, and the equipment carried, is consistent with the conditions prevailing at the time (See IEM JCAR ops 3.240(a)(6)).

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

OPS3.243 Operations in areas with specific navigation performance requirements

(See IEM OPS3.243)

(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 Authority (RNP/RNAV Approval). (See also OPS3.865(c)(2).)

OPS 3.245 Reserved .

OPS3.250 Establishment of minimum flight altitudes

(See IEM OPS3.250)

(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 OPS3 , Subparts F to I.

(b) The method for establishing minimum flight altitudes must be approved by CARC.

(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.

OPS3.255 Fuel policy

(See AMC OPS3.255)

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

(b) An operator shall ensure that the planning of flights is 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 preflight calculation of usable fuel required for a flight includes:

(1) Taxi fuel;

(2) Trip fuel;

(3) Reserve fuel consisting of:

(i) Contingency fuel (see IEM OPS3.255(c)(3)(i));

(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 re-planning procedures for calculating usable fuel required when a flight has to proceed along a route or to a destination other than originally planned 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.

OPS3.260 Carriage of Persons with Reduced Mobility

(See IEM OPS3.260)

(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

OPS3.265 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 abovementioned persons are to be carried on board.

OPS3.270 Stowage of baggage and cargo

(See Appendix 1 to OPS3.270)

(See AMC OPS3.270)

(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.

OPS3.275 Reserved

OPS3.280 Passenger Seating

(See IEM OPS3.280)

[(See AC No. 1 to OPS3.280)

(See AC No. 2 to OPS3.280)

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.

OPS3.285 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 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, (OPS3.770 and OPS3.775 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

(OPS3.825, 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 harness.

(iii) Back of the seat to be in the upright position and tray table 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.

OPS3.290 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 JCAR 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 OPS3.125 and OPS3.135 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 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 OPS3 , 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.

OPS3.295 Selection of heliports

(a) An operator shall establish procedures for the selection of destination and/or alternate heliports in accordance with OPS3.220 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) The destination is a coastal heliport;

(See AMC OPS3.295(c)(1) and IEM OPS3.295(c)(1)); or

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

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

(d) An operator must select two destination alternatives when:

(1) The appropriate weather reports or forecasts for the destination, or any combination thereof, indicate that during a period commencing 1 hour before and ending 1 hour after the estimated time of arrival the weather conditions will be below the applicable planning minima; or

(2) no meteorological information is available for the destination.

(e) Off-shore alternates may be specified subject to the following (see AMC OPS3.295(e) and IEM OPS3.295(e)):

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

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

(3) Deck availability shall be guaranteed. The dimensions, configuration and obstacle clearance of individual helidecks or other sites shall be assessed 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 (see IEM OPS3.295(e)(4)).

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

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

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

OPS3.297 Planning minima for IFR flights.

(a) Planning minima for take-off alternates. An operator shall not select a heliport as a take-off alternate heliport unless the appropriate weather reports or forecasts and aerodrome or landing forecasts, or any combination thereof indicate that, during a period commencing 1 hour before and ending 1 hour after the estimated time of arrival at the take-off alternate heliport, the weather conditions will be at or above the applicable landing minima specified in accordance with OPS3.225. The ceiling must be taken into account when the only approaches available are non-precision approaches. Any limitation related to one engine inoperative operations must be taken into account.

(b) Planning minima for destination and destination alternate heliports.

An operator shall only select the destination heliport and/or destination alternate heliport(s) when the appropriate weather reports or forecasts and aerodrome or landing forecasts, or any combination thereof, indicate that, during a period commencing 1 hour before and ending 1 hour after the estimated time of arrival at the heliport, the weather conditions will be at or above the applicable planning minima as follows:

(1) Except as provided in OPS3.295(e), planning minima for a destination heliport will be:

(i) RVR/visibility specified in accordance with OPS3.225; and

(ii) For a non-precision approach, the ceiling at or above MDH; and

(2) Planning minima for destination alternate heliport(s):

Table 1 Planning minima destination alternates

Type of Approach	Planning Minima
Cat II and III	Cat I (Note 1)
Cat I	Plus 200ft/ 400m visibility
Non-Precision	Non-precision (note 2) Plus 200ft/400m Visibility

Note 1: RVR.

Note 2: The ceiling must be at or above the MDH.

OPS3.300 Submission of ATS Flight Plan

(See AMC OPS3.300)

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.

OPS3.305 Refueling/defueling with passengers embarking, on board or disembarking

(See Appendix 1 to OPS3.305)

(See IEM OPS3.305)

An operator shall ensure that no helicopter is re/defueled 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.

OPS3.307 Refueling/defueling with wide-cut fuel

(See IEM OPS3.307)

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

OPS3.310 Crew Members at stations

(a) Flight crew members

(1) During Taxi/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.(See IEM OPS3.310(b).)

OPS3.315 Reserved

OPS3.320 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 taxiing, 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.

OPS3.325 Securing of passenger cabin and galley(s)

(a) An operator shall establish procedures to ensure that before taxiing, 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.

OPS3.330 Accessibility of emergency equipment

(a) The operator shall establish procedures to ensure that when operating over water in Performance Class 3, account is taken of the duration of the flight and conditions to be encountered when deciding if the lifejackets should be worn by all occupants.

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

OPS3.335 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.

OPS3.340 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 re-planning, unless information is available indicating that the expected weather conditions at the destination and/or required alternate heliport(s) prescribed in OPS3.295 are at or above the planning minima, prescribed in OPS3.297.

(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, if required, are at or above the applicable heliport operating minima, prescribed in sub-paragraph (a) above.

(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.

OPS3.345 Ice and other contaminants:

Ground procedures

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

(b) A commander shall not commence takeoff 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.

OPS3.346 Ice and other contaminants

(a) When appropriate, an operator shall establish procedures for flights in expected or actual icing conditions.

(See AC OPS3.346 and OPS3.675)

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

OPS3.350 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.

OPS3.355 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.

OPS3.360 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.

OPS3.365 Minimum flight altitudes

(See IEM OPS3.250)

The pilot flying shall not descend below specified minimum altitudes except when necessary for take-off or landing, or when descending in accordance with procedures approved by CARC.

OPS3.370 Simulated non normal situations in flight

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

OPS3.375 In-flight fuel management

(See Appendix 1 to OPS3.375)

(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.

OPS3.380 Reserved

OPS3.385 Use of supplemental oxygen

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 13 000 ft.

OPS3.390 Reserved

OPS3.395 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.

OPS3.398 Use of Airborne Collision Avoidance System (ACAS)

(See AC OPS3.400)

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

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

OPS3.400 Approach and landing conditions

(See IEM OPS3.400)

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.

OPS3.405 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. (See IEM OPS3.405(a).)

(b) Where RVR is not available, RVR values may be derived by converting the reported visibility in accordance with Appendix 1 to OPS3.430, 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 the conduct of the flight has been delegated shall make the decision to continue or abandon the approach before descending below 1 000 ft above the heliport on the final approach segment. If the MDA/H is at or above

1000 ft above the heliport, the operator shall establish a height, for each approach procedure, below which the approach shall not be continued if the RVR/visibility is less than the applicable minima.

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

OPS3.410 Reserved

OPS3.415 Journey log

A commander shall ensure that the Journey log is completed.

OPS3.420 Occurrence reporting

(a) Terminology

(1) Incident.

An occurrence, other than an accident, associated with the operation of a helicopter which affects or could affect the safety of operation.

(2) Serious Incident.

An incident involving circumstances indicating that an accident nearly occurred.

(3) Accident.

An occurrence associated with the operation of a helicopter which takes place between the time any person boards the helicopter with the intention of flight until such time as all persons have disembarked, in which:

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

(A) being in the helicopter;

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

(C) direct exposure to jet blast or rotor downwash; except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew: or

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

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

(b) Incident Reporting.

An operator shall establish procedures for reporting incidents taking into account responsibilities described below and circumstances described in subparagraph (d) below.

(1) OPS3.085(b) specifies the responsibilities of crew members for reporting incidents that endanger, or could endanger, the safety of operation.

(2) The commander or the operator of a helicopter shall submit a report to CARC of any incident that endangers or could endanger the safety of operation.

(3) Reports shall be dispatched within 72 hours of the time when the incident was identified unless exceptional circumstances.

(4) A commander shall ensure that all known or suspected technical defects and all exceedences of technical limitations occurring while he was responsible for the flight are recorded in the helicopter technical log. If the deficiency or exceedence of technical limitations endangers or could endanger the safety of operation, the commander must in addition initiate the

submission of a report to the Authority in accordance with paragraph (b)(2) above.

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

(c) Accident and Serious Incident Reporting.

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

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

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

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

(d) Specific Reports.

Occurrences for which specific notification and reporting methods must be used are described below;

(1) Air Traffic Incidents.

A commander shall without delay notify the air traffic service unit concerned of the incident and shall inform them of his intention to submit an air traffic incident report after the flight has ended whenever a helicopter in flight has been endangered by:

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

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

(iii) Failure of air traffic services facilities. In addition, the commander shall notify the Authority of the incident.

(2) Airborne Collision Avoidance System Resolution Advisory.

A commander shall notify the air traffic service unit concerned and submit an ACAS report to the Authority whenever a helicopter in flight has maneuvered in response to an ACAS Resolution Advisory.

(3) Bird Hazards and Strikes

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

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

(4) 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 service unit of any dangerous goods on board. After the helicopter has landed, the commander shall, if the occurrence has been associated with and was related to the transport of dangerous goods, comply also with the reporting requirements specified in JCAR ops 3.1225.

(5) Unlawful Interference

Following an act of unlawful interference on board a helicopter, the commander or, in his absence, the operator shall submit a report as soon as practicable to the local Authority and to the Authority in the State of the operator. (See also OPS3.1245

(6) Encountering Potential Hazardous Conditions.

A commander shall notify the appropriate air traffic services unit as soon as practicable whenever a potentially hazardous condition such as an irregularity in a ground or navigational facility, a meteorological phenomenon or a volcanic ash cloud is encountered during flight.

OPS3.426 Flight hours reporting:

(See AC OPS3.426)

(a) An operator shall make available to CARC the hours flown for each helicopter operated during the previous calendar year.

Appendix 1 to OPS3.270Stowage 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 stowage's must not be exceeded;

(3) Under seat/ under seat stowage's 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 takeoff, 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 OPS3.305

Refueling/defueling with passengers embarking, on board or disembarking:

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

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

(2) Door(s) on the non-refueling 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 re/defueling, fueling 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 OPS3.375 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) Re Plan the flight in accordance with OPS3.295(e)(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 OPS3.340(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, planned in accordance with AMC OPS3.255 paragraph 3, 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 OPS3.295(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 OPS3.340(a)(2).

SUBPART- E

ALL WEATHER OPERATIONS

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 JCAR-STD.

OPS3.430 Heliport Operating minima

General

(See Appendix 1 to OPS3.430)

(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 CARC. 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;

(see AMC OPS3.430(b)(4))

(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.

OPS3.435 Terminology

(a) Terms used in this Subpart and not defined in PART-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 Takeoffs.

(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 takeoff 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.

(6) Cloud base. The height of the base of the lowest observed, or forecast, cloud element in the vicinity of an aerodrome, or heliport, or within a specified area of operations. The height of the cloud base is normally measured above aerodrome elevation, but in the case of offshore operations cloud base in measured above mean sea level

OPS3.440 Low visibility operations -General operating rules

(See Appendix 1 OPS3.440)

(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 PART-AWO or an equivalent accepted by CARC;

(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 CARC;

(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 CARC.

OPS3.445 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.

OPS3.450 Low visibility operations Training and Qualifications

(See Appendix 1 to OPS3.450)

(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 CARC and included in the Operations Manual. This training is in addition to that prescribed in OPS3 , Subpart N; and

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

OPS3.455 Low Visibility operations Operating Procedures (LVPs)

(See Appendix 1 to OPS3.455)

(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 taxiing, 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.

OPS3.460 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.

OPS3.465 VFR Operating minima

(See Appendices 1 and 2 to OPS3.465)

(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 OPS3.465;

(2) Subject to sub-paragraph (3) and (4) below, 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 tha0t will

give adequate opportunity to observe other traffic and any obstacles in time to avoid a collision (see AC to OPS3 .456.).

Low level overwater flights out of sight of land are only to be conducted under VFR when the cloud ceiling is greater than 600 ft by day and 1200 ft by night.

(3) In Class G airspace, when flying between helidecks where the overwater sector is less than 10 nm, VFR flights are conducted in accordance with Appendix 2 to OPS3.465; and

(4) Special VFR flights comply with any State or Zone minima in force.

Appendix 1 to OPS3.430 Heliport Operating Minima

(See IEM to Appendix 1 to OPS3.430)

(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 Authority.

(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 (See IEM to Appendix 1 to OPS3.430 sub-paragraph (a)(3)(i):

Table 1 - RVR/Visibility for take-off

Onshore heliports with IFR departure Procedures	RVR/Visibility
No lighting and no markings (Day)	250m or the rejected take-off distance, whichever is greater
No markings (Night) 800m	800m
Runway edge/FATO lighting and centre line marking	200m
Runway edge/FATO lighting, centre line marking and RVR information	150m
Offshore Helideck	
Two pilot operations	250m (1)
Single pilot operations	500m (1)

Note 1: The commander must establish that the take-off flight path is free of obstacles.

(ii) For Performance Class 2 operations onshore:

The commander must operate to take-off minima of 800 m RVR/VIS and remain clear of cloud during the take-off manoeuvre until reaching Performance Class 1 capabilities.

(iii) For Performance Class 2 operations offshore:

The commander must operate to minima not less than for Class 1 and remain clear of cloud during the take-off maneuver until reaching Performance Class 1 capabilities. (See note 1 to Table 1 above.)

(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)	300 ft

(2) Minimum Descent Height.

An operator must ensure that the minimum descent height for a non-precision approach is not lower than either:

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

(ii) The system minimum.

(3) Visual Reference. A pilot may not continue an approach below MDA/MDH unless at least one of the following visual references for the intended 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 CARC

(4) Required RVR. (See AMC OPS3.430(b)(4).)

(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 – Onshore non-precision approach minima

Onshore Non-Precision Approach Minima (5)(6)(7)				
MDH (ft)		Facilities/RVR		
	Full(1)	Intermediate (2)	Basic (3)	Nil (4)
250-299 ft	600 m	800 m	1 000 m	1 000 m
300-449 ft	800 m	1 000 m	1 000 m	1 000 m
450 ft and above	1 000 m	1 000 m	1 000 m	1 000 m

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

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

Note 3: Basic facilities comprise FATO/runway markings, <420 m 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 ½ nm of the landing threshold, the approach minima given for full facilities may be used regardless of the length of approach lighting available.

However, FATO/runway edge lights, threshold lights, end lights and FATO/runway markings are still required.

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

(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;

(viii) The touchdown zone lights; or

(ix) FATO/runway edge lights.

(4) Required RVR.

For Category I operations by Performance Class 1 and 2 helicopters the following minima shall apply:

Table 4 - Onshore Precision Approach Minima - Category I

Onshore Precision Approach Minima Category I note (5)(6)(7)				
DH (ft)	Facilities/RVR			
	Full (1)	Intermediate (2)	Basic (3)	Nil (4)
200 ft	500 m	600 m	700 m	1 000 m
201-250 ft	550 m	650 m	750 m	1 000 m
251-300 ft	600 m	700 m	800 m	1 000 m
301 ft & above	750 m	800 m	900 m	1 000 m

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

Lights must be on.

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

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

Note 4: Nil approach light facilities comprise 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 Authority.

(ii) Single pilot operations. For single pilot operations, an operator must calculate the minimum RVR for all approaches in accordance with OPS3.430 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

(See IEM to OPS3.430, subparagraph (d))

(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 centre line of the approach lights, or touchdown zone lights, or FATO/runway centre 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 vs. DH

Onshore Precision Approach Minima Category II	
Decision height	Auto-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) Reserved

(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	2.5
Any type of lighting	1.0	1.5
No lighting	1.0	Not applicable

(i) Airborne Radar Approach (ARA)

For overwater operations

(See IEM to Appendix 1 to OPS3.430, sub-paragraph (i)

(1) General:

(i) An operator shall not conduct ARAs unless authorized by CARC.

(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 CARC 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 subparagraphs (2) and (3) above. The Decision Range shall not be less than 1·0 nm.

Appendix 1 to OPS3.440

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 the JCAA into Category II or III service.

NOTE: For helicopter types already used for Category II or III operations in a JAA 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 PART-AWO.

(2) Criteria for a successful approach.

An approach is regarded as successful if:

(i) The criteria are as specified in PARTAWO 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 CARC 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 Authority, 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 rollout 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 CARC, 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 Authority of a JAA 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, CARC 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 CARC.

(i) Maintenance of Category II, Category III and LVTO 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 PART-M – M.A.302 Maintenance Program, which must be approved by CARC.

Appendix 1 to OPS3.450

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 CARC.

(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 JAA 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 autoland 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 un serviceability 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 Authority. 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 subparagraphs (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 subparagraph(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 autolands except that only 1 autoland 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 JAA operator.

(3) The Authority 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, CARC may approve such training in a helicopter without the requirement for minimum RVR conditions. (See Appendix 1 to JCAR 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 Authority 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 OPS3.455 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 rollout;

(3) Auto-coupled approach followed by auto-flare, hover, autolanding and manual rollout; and

(4) Auto-coupled approach followed by auto-flare, hover, autolanding 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 takeoff, 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 or 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 OPS3.465

Minimum Visibilities for VFR Operations

Airspace class	ABCDE	F	G
		Above 900 m (3000ft) AMSL or above 300m(1000ft) above terrain, whichever is the higher	Above 900 m (3 000ft) AMSL or 300 m (1000 ft) above terrain, whichever is the higher
Distance from cloud	1 500 m horizontally 300 m (1 000 ft) vertically	Clear of cloud and in sight of the surface	
Flight visibility	8 km at and above 3 050 m (10 000 ft) AMSL (Note 1) 5 km below 3 050 m (10 000 ft) AMSL (Note 2)	5 km (Note 2)	

Note 1: When the height of the transition altitude is lower than 3 050 m (10 000 ft) AMSL, FL 100 should be used in lieu of 10 000 ft.

Note 2: Helicopters may be operated in flight visibility down to 1 500 m [by day], provided the appropriate ATS authority 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 appropriate ATS Authority, helicopters may be permitted to operate down to a flight visibility of 800 m by day.

Appendix 2 to OPS3.465

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 pilot	300 ft	2 km (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

OPS3.470 Applicability

(a) An operator shall ensure that:

(1) helicopters operating to/from heliports located in a congested hostile environment: or

(2) helicopters which have a maximum approved passenger seating configuration (MAPSC) of more than 19; are operated in accordance with OPS3 , Subpart G (Performance Class 1): except helicopters with a maximum approved passenger seating configuration (MAPSC) of more than 19 and operated to/from helidecks; which may be operated in accordance with OPS3 .517(a) **or** which have an operational approval in accordance with Appendix 1 to OPS3.005(i)

(b) Unless otherwise prescribed by subparagraph (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 OPS3 , Subpart G or H (Performance Class 1 or 2);

(c) Unless otherwise prescribed by subparagraph (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 OPS3 , Subpart G, H or I (Performance Class 1, 2 or 3).

OPS3.475 General

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

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

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

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

factors already incorporated in the Helicopter Flight Manual performance data to avoid double application of factors.

(c) When showing compliance with the requirements of the appropriate Subpart, due account shall be taken of the following parameters:

(1) mass of the helicopter;

(2) helicopter configuration;

(3) environmental conditions, in particular:

(i) pressure-altitude, and temperature;

(ii) wind:

(A**)** for take-off, take-off flight path and landing requirements, accountability for wind shall be no more than 50% of any reported steady head wind component of 5 knots or more.

(B) Where take-off and landing with a tail wind component is permitted in the Helicopter Flight Manual, and in all cases for the takeoff flight path, not less than 150% of any reported tail wind component shall be taken into account.

(C) Where precise wind measuring equipment enables accurate measurement of wind velocity over the point of take-off and landing, alternate wind components specific to a site may be approved by CARC. (See AC OPS3.475(c)(3)(ii));

(4) operating techniques; and

(5) operation of any system which have adverse effect on performance

OPS3.477 Obstacle accountability

(See AC to Subpart H)

(a) For the purpose of obstacle clearance requirements, an obstacle, located beyond the FATO, in the take-off flight path or the missed approach flight path, shall be considered if its lateral distance from the nearest point on the surface below the intended flight path is not further than:

(1) For VFR operations:

(i) half of the minimum FATO (or the equivalent term used in the Flight Manual) width defined in the Helicopter Flight Manual (or, when no width is defined 0.75 D), plus 0.25 times D (or 3 m, whichever is greater), plus: 0.10 DR for VFR day operations and 0.15 DR for VFR night operations.

(2) For IFR operations:

(i) 1.5 D (or 30 m, whichever is greater), plus: 0.10 DR for IFR operations with accurate course guidance 0.15 DR for IFR operations with standard course guidance 0.30 DR for IFR operations without course guidance:

(ii) when considering the missed approach flight path, the divergence of the obstacle accountability area only applies after the end of the takeoff distance available;

(iii) standard course guidance includes ADF and VOR guidance. Accurate course guidance include ILS, MLS or other course guidance providing an equivalent navigational accuracy.

(3) For operations with initial takeoff conducted visually and converted to IFR/IMC at a transition point, the criteria required in (1) apply up to the transition point then the criteria required in (2) apply after the transition point:

(i) the transition point cannot be located before the end of TODRH for helicopters operating in performance Class 1 and before the DPATO for helicopters operating in performance Class 2;

(b) For take-off using a backup (or a lateral transition) procedure; for the purpose of obstacle clearance requirements, an obstacle, located in the back-up (or lateral transition) area, shall be considered if its lateral distance from the nearest point on the surface below the intended flight path is not further than:

(1) half of the minimum FATO (or the equivalent term used in the Flight Manual) width defined in the Helicopter Flight Manual (or, when no width is defined 0.75 D), plus 0.25 times D (or 3 m, whichever is greater), plus 0.10 for VFR day, or 0.15 for VFR night, of the distance travelled from the back of the FATO. (see AC OPS3.490(d))

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

(1) 7 R for day operations if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;

(2) 10 R for night operations if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;

(3) 300 m if navigational accuracy can be achieved by appropriate navigation aids; and

(4) 900 m in the other cases.

OPS3.480 Terminology

(a) Terms used in Subparts F, G, H, and I and not defined in PART1 have the following meaning:

(1) 'Category A':

with respect to helicopters means multi-engine helicopters designed with engine and system isolation features specified in JCAR 27/29 see JCAR 39 or equivalent acceptable to CARC 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 multiengine 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) D: The largest dimension of the helicopter when the rotors are turning.

(6) 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.

(7) 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.

(8) Distance DR.

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

(9) Elevated heliport.

A heliport which is at least 3 m above the surrounding surface.

(10) 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).

(11) Helideck.

A heliport located on a floating or fixed off-shore structure.

(12) 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.

(13) 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 overwater operations, the open sea areas North of 45N and South of 45S designated by the Authority of the State concerned; and

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

(See IEM OPS3.480(a)(13))

(14) 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.

(15) Landing distance available (LDAH).

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.

(16) Landing distance required (LDRH).

The horizontal distance required to land and come to a full stop from a point 15m (50ft) above the landing surface.

(17) Maximum approved passenger seating configuration (MAPSC).

The maximum passenger seating capacity of an individual helicopter, excluding crew seats, used by the operator, approved by the Authority and included in the Operations Manual.

(18) 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).

(19) 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.

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

(21) 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.

(22) 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.

(23) 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 multiengine helicopter but will be required in a single engine helicopter.

(24) Rejected take-off distance available (RTODAH).

The length of the final approach and take-off area declared available and suitable for helicopters operated in Performance Class 1 to complete a rejected take-off.

(25) Rejected take-off distance required (RTODRH).

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.

(26) 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 un-factored wind prior to take-off.

(27) 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.

(28) R. Rotor radius.

(29) Safe forced landing. Unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface.

(30) 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.

(31) Take-off distance available.

TODAH 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 takeoff.

(32) Take-off distance required (TODRH).

The horizontal distance required from the start of the take-off to the point at which VTOSS, a selected eight and a positive climb gradient are achieved, following failure of the critical power unit being recognized at TDP, the remaining power units within approved operating limits. The selected height is to be determined with the use of Helicopter Flight Manual data, and is to be at least 10.7 m (35 ft) above:

(i) the take-off surface; or

(ii) as an alternative, a level defined by the highest obstacle in the takeoff distance required.

(33) Take-off flight path.

The vertical and horizontal path, with the critical power unit inoperative, from a specified point in the take-off to 1000 ft above the surface.

(34) 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.

(35) Touchdown and lift-off area (TLOF).

A load bearing area on which a helicopter may touchdown or lift off.

(36) Vy. Best rate of climb speed.

SUBPART- G
PERFORMANCE CLASS 1

OPS3.485 General

An operator shall ensure that helicopters operated in Performance Class 1 are certificated in Category A. (see AC OPS3.480(a)(1) and (a)(2)).

OPS3.490 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 , for the procedure to be used (see AC OPS3.490 & 3.510).

(2) The take-off mass is such that:

(i) it is possible to reject the takeoff and land on the FATO in case of the critical power-unit failure being recognized at or before the TDP;

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

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

(iv) As an alternative, the requirement in OPS3.490(a)(2)(iii) above may be disregarded provided that the helicopter, with the critical power unit failure recognized at TDP can, when continuing the take-off, clear all obstacles to the end of the take-off distance required by a vertical margin of not less than 10.7 m (35 ft)

(see AC OPS3.480(a)(31));

(b) When showing compliance with subparagraph (a) above, account shall be taken of the appropriate parameters of OPS3.475(c) at the heliport of departure:

(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.

(d) For take-off using a backup (lateral transition) procedure, the operator shall ensure that, with the critical power-unit inoperative, all obstacles in the back-up (lateral transition) area are cleared by an adequate margin (see AC OPS3.490(d))

OPS3.495 Take-off Flight Path

(a) An operator shall ensure that, from the end of the take-off distance required with the critical power unit failure recognized at the TDP:

(1) The take-off mass is such that the take-off flight path provides a vertical clearance of not less than 10.7 m (35 ft) for VFR operations and 10.7 m (35 ft) + 0.01 DR for IFR operations above all obstacles located in the climb path. Only obstacles as specified in OPS3.477 have to be considered.

(2) Where a change of direction of more than 15° is made, adequate allowance is made for the effect of bank angle on the ability to comply with the obstacle clearance requirements. This turn is not to be initiated before reaching a height of 61 m (200 ft) above the take-off surface unless permitted as part of an approved procedure in the Flight Manual.

(b) When showing compliance with subparagraph (a) above, account shall be taken of the appropriate parameters of OPS3.475(c) at the heliport of departure.

OPS3.500 En-route – critical power unit inoperative

(a) An operator shall ensure that the en-route flight path with the critical power unit inoperative, appropriate to the meteorological conditions expected for the flight complies with either subparagraph (1), (2) or (3) below at all points along the route.

(1) 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 (1 000 ft) 600 m (2 000 ft) in areas of mountainous terrain, above all [terrain and obstacles along the route within 9.3 km (5 nm) on either side of the intended track.

(2) When it is intended that the flight will be conducted without the surface in sight, the flight path permits the helicopter to continue flight from the cruising altitude to a height of 300 m (1000 ft) above a landing site where a landing can be made in accordance with OPS3.510. The flight path clears vertically, by at least 300 m (1000 ft), 600 m (2000 ft) in areas of mountainous terrain, all terrain and obstacles along the route within 9.3 km (5 nm) on either side of the intended track. Drift- down techniques may be used.

(3**)** When it is intended that the flight will be conducted in VMC with the surface in sight, the flight path permits the helicopter to continue flight from the cruising altitude to a height of 300 m (1000 ft) above a landing site

where a landing can be made in accordance with OPS3.510, without flying at any time below the appropriate minimum flight altitude, obstacles within 900m on either side of the route need to be considered.

(b) When showing compliance with paragraph (a)(2) or (a)(3) above, an operator shall ensure that:

(1) The critical power unit is assumed to fail at the most critical point along the route

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

(3) 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. (See AC OPS3.500(b)(3)).

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

(c) The width margins of subparagraphs (a)(1) and (a)(2) above shall be increased to 18.5 km (10 nm) if the navigational accuracy cannot be met for 95% of the total flying time (see OPS3.240, 3.243 and 3.250.

OPS3.510 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, for the procedure to be used (see AC OPS3.490 & 3.510).

(2) in the event of the critical power unit failure being recognized at any point at or before the LDP, it is possible either to land and stop within the FATO, or to perform a balked landing and clear all obstacles in the flight path by a vertical margin of 10.7 m (35 ft) (see AC OPS3.480(a)(32)). Only obstacles as specified in OPS3.477 have to be considered;

(3) in the event of the critical power-unit failure being recognized at any point at or after the LDP, it is possible to clear all obstacles in the approach path; and

(4) in the event of the critical power-unit failure being recognized at any point at or after the LDP, it is possible to land and stop within the FATO.

(b) When showing compliance with subparagraph (a) above, account shall be taken of the appropriate parameters of OPS3.475(c) for the estimated time of landing at the destination heliport, or any alternate if required.

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

SUBPART-H
PERFORMANCE CLASS 2

OPS3.515 General

(a) An operator shall ensure that helicopters operated in Performance Class 2 are certificated in Category A see also AC to OPS3.480(a)(1) and (a)(2)).

OPS3.517 Operations Without an Assured Safe Forced Landing Capability

(a) An operator shall be satisfied that operations without an assured safe forced landing capability during the take-off and landing phases are not conducted unless the operator has been granted the relevant approval by CARC in accordance with Appendix 1 to OPS3.517(a).

(See also OPS3.470(a)(1).)

OPS3.520 Take-off

(See AC to Subpart H)

(See IEM- OPS3.520 & 3.535)

(a) An operator shall be satisfied 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 (1 000 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 other than specified in OPS3.517(a), the takeoff is conducted such that a safe forced landing can be executed until the point where safe continuation of the flight is possible (see AC to Subpart H paragraph 6.2).

(3) For operations in accordance with OPS3.517(a) in addition to the requirements of (a)(1) above:

(i) The take-off mass does not exceed the maximum mass specified in the Helicopter Flight Manual for an AEO OGE hover in still air with all power units operating at an appropriate power rating.

(ii) For operations to/from a helideck:

(A) with a helicopter that has a maximum approved passenger seating configuration (MAPSC) of more than 19; and

(B**)** from 1st January 2010 any helicopter operated to/from a helideck located in a non-congested hostile environment as defined in OPS3.480(13)(ii)(A) the take-off mass takes into account: the procedure; deck-edge miss; and drop down appropriate to the height of the helideck – with the critical power unit(s) inoperative and the remaining power units operating at an appropriate power rating.

(b) When showing compliance with subparagraph (a) above, account shall be taken of the appropriate parameters of OPS3.475(c) at the heliport of departure.

(c) The part of the take-off before the requirement of OPS3.525 is met shall be conducted in sight of the surface.

OPS3.525 Take-off Flight Path

(See AC to Subpart H)

(a) An operator shall be satisfied that from DPATO or, as an alternative, no later than 200 ft above the take-off surface, with the critical power unit inoperative the requirements of OPS3.495(a)(1), (2) and (b) are met.

OPS3.530 En-route - Critical power unit inoperative

(a) An operator shall ensure that the requirement of OPS3.500 is met.

OPS3.535 Landing

(See IEM OPS3.520 & 3.535)

(See AC to Subpart H)

(a) An operator shall be satisfied 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 rating.

(2) If the critical power unit fails at any point in the approach path:

(i) a balked landing can be carried out meeting the requirement of OPS3.525; or

(ii) for operations other than specified in OPS3.517(a) the helicopter can perform a safe-forced landing.

(3) For operations in accordance with OPS3.517(a) in addition to the requirements of (a)(1) above:

(i) The landing mass does not exceed the maximum mass specified in the Helicopter Flight Manual for an AEO OGE hover in still air with all power units operating at an appropriate power rating.

(ii) For operations to/from a helideck:

(A) with a helicopter that has a maximum approved passenger seating configuration (MAPSC) of more than 19; and

(B) from 1st January 2010 any helicopters operated to/from a helideck located in a non-congested hostile environment as defined in OPS3.480(13)(ii)(A)

the landing mass takes into account the procedure, and drop down appropriate to the height of the helideck - with the critical power unit inoperative and the remaining power unit(s) operating at an appropriate power rating.

(b) When showing compliance with subparagraph (a) above, account shall be taken of the appropriate parameters of OPS3.475(c) at the destination heliport or any alternate, if required.

(c) The part of the landing after which the requirement of OPS3.525 cannot be met shall be conducted in sight of the surface.

SUBPART- I

PERFORMANCE CLASS 3

OPS3.540 General

(a) An operator shall ensure that:

(1) Helicopters operated in Performance Class 3 are certificated in either Category A or B (see also AC OPS3.480(a)(1) and (a)(2)).

(2) Operations are only conducted from/to those heliports and over such routes, areas and diversions contained in a non-hostile environment, except for the take-off and landing phase as provided in (b) below.

(b) An operator may conduct operations to/ from a heliport located outside a congested hostile environment, without an assured safe forced landing capability during the take-off and landing phases (see AC OPS3.540(b)):

(1) during take-off; before reaching Vy or 200 ft above the take-off surface; or

(2) during landing; below 200 ft above the landing surface; provided the operator has been granted a relevant approval by the Authority in accordance with Appendix 1 to OPS3.517(a).

(c) An operator shall ensure that operations are not conducted:

(1) out of sight of the surface;

(2) at night;

(3) when the ceiling is less than 600 ft; or

(4) when the visibility is less than 800m.

OPS3.545 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 takeoff mass specified for a hover out of ground effect with all power units operating at take-off power.

(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 the alleviation contained in sub-paragraph 3.540(b).

OPS3.550 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 .

OPS3.555 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) 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)(2) or 3.540(b).

SUBPART -J
MASS AND BALANCE

OPS3.605 General

(See Appendix 1 to OPS3.605)

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

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

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

(d) An operator must establish the mass of the traffic load, including any ballast, by actual weighing or determine the mass of the traffic load in accordance with standard passenger and baggage masses as specified in OPS3.620.

(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. (See IEM OPS3.605(e).)

OPS3.607 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 non-revenue load.

(d) Passenger classification.

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

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

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

OPS3.610 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 OPS3.605. This system must cover all types of intended operations.

OPS3.615 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 CARC.

(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.

OPS3.620 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.

(See AMC OPS3.620(a)).

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

Passenger seats	**20 and more**		**30 and more All adult**
	male	**female**	
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**	**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 CARC 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 OPS3.620(h). After verification and approval by CARC 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 13, then such higher values must be used.

(See IEM OPS3.620(h).)

(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. (See IEM OPS3.620(i) & (j).)

(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. (See IEM OPS3.620(i) & (j).)

(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.

OPS3.625 Mass and balance documentation

(See Appendix 1 to OPS3.625)

(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 OPS3.1055(a)(12).)

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

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

Appendix -1 to OPS3.605

Mass and Balance-General

(See OPS3.605)

(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 JAA operator with an approved mass control program to another JCAA operator with an approved program need not be weighed prior to use by the receiving operator unless more than 4 years have elapsed since the last weighing.

(ii) The individual mass and centre of gravity (CG) position of each helicopter shall be re-established periodically. The maximum interval between two weighings must be defined by the operator and must meet the requirements of OPS3.605(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.

(See IEM to Appendix 1 to OPS3.605, sub-paragraph (a)(2)(iii)).

(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 Authority 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) Centre 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 centre 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 Authority.

(See IEM to Appendix 1 to OPS3.605, subparagraph (d).)

(2) In-flight centre 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 OPS3.620(h)

Procedure for establishing revised standard mass values for passengers and baggage

(See IEM to Appendix 1 to OPS3.620(h))

(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 (the statistical procedure, complemented with a worked example for determining the minimum required sample size and the average mass, is included in IEM OPS3.620(h)); 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 OPS3.607(d) and OPS3.620(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 aboard 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.

(a) 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) (see also IEM OPS3.620(h)). 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 (see IEM OPS3.620(h)) 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 of passenger seats	**Required mass increment**
1-5 incl.	16 kg
6-9 incl.	8 kg
10-19 incl.	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 CARC 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. (See AMC to Appendix 1 to OPS3.620(h), sub-paragraph (c)(4).)

(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 CARC 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 OPS3.625

Mass and Balance Documentation

(See OPS3.625)

(See IEM to Appendix 1 to OPS3.625)

(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 ;

(J) The load distribution;

(K) The applicable helicopter CG positions; and

(L) The limiting mass and CG values.

(ii) Subject to the approval of CARC, an operator may omit some of this Data from the mass and balance documentation.

(2) Last Minute Change.

(a) 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 CARC 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

OPS3.630 General introduction

(See IEM OPS3.630)

(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 (ANNEX 5.030 refers).

(b) Instruments and equipment minimum performance standards are those prescribed in the applicable Joint Technical Standard Orders (JTSO) as listed in PART-39, 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 OPS3 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 OPS3.640(a)(4);

(2) An accurate time piece referred to in OPS3.650(b) & 3.652(b);

(3) Chart holder referred to in OPS3.652(n).

(4) First aid kits referred to in OPS3.745;

(5) Megaphones referred to in OPS3.810;

(6) Survival and pyrotechnic signaling equipment referred to in OPS3.835(a) and (c); and

(7) Sea anchors and equipment for mooring, anchoring or maneuvering amphibians on water referred to in OPS3.840.

(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 1 flight crew member it must be installed so that the instrument is visible from each applicable flight crew station.

OPS3.640 Helicopter operating lights

An operator shall not operate a helicopter unless it is equipped with:

(a) For flight by day under VFR:

(1) Anti-collision light system;

(b) For flight under IFR or by night, in addition to equipment specified in subparagraph (a) above:

(1) 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; and

(2) Lighting supplied from the helicopter's electrical system to provide illumination in all passenger compartments; and

(3) An electric torch for each required crew member readily accessible to crew members when seated at their designated station; and

(4) Navigation/position lights; and

(5) 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;

(6) Lights to conform with the International regulations for preventing collisions at sea if the helicopter is amphibious.

OPS3.647 Equipment for operations requiring a radio communication and/or radio navigation system

(See IEM OPS3.647)

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.

OPS3.650 Day VFR operations

Flight and navigational instruments and associated equipment

(See AMC OPS3.650/3.652)

(See AC OPS3.650/3.652)

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 direction indicator;

(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 (see AMC OPS3.650(g) & 3.652(k).)

(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 certificated take-off mass (MCTOM) over 3 175 kg or any helicopter operating over water when out of sight of land or when the visibility is less than 1 500 m, must be equipped with the following flight instruments:

(1) An attitude indicator; and

(2) A gyroscopic 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 (MCTOM) over 3 175 kg or having a maximum approved passenger seating configuration (MAPSC) of more than 9.

OPS3.652 IFR or night operations Flight and navigational instruments and associated equipment

(See AMC OPS3.650/3.652)

(See AC OPS3.650/3.652)

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 [direction indicator];

(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. For single pilot night VFR operations one pressure altimeter may be substituted by a radio altimeter.

(d) An airspeed indicating system with heated pitot tube or equivalent means for preventing malfunctioning due to either condensation or icing including an annunciation of pitot heater failure. The pitot heater failure annunciation requirement does not apply to those helicopters with a maximum approved

passenger seating configuration (MAPSC) of 9 or less or a maximum certificated take-off mass (MCTOM) of 3 175 kg or less and issued with an individual Certificate of Airworthiness prior to 1 August 1999 (see AMC OPS3.652(d) & (m)(2));

(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 gyroscopic direction indicator for VFR night and a magnetic gyroscopic direction indicator for IFR.

(k) A means of indicating in the flight crew compartment the outside air temperature calibrated in degrees Celsius (see AMC OPS3.650(g) and 3.652(k)); and (l). An alternate source of static pressure for the altimeter and the airspeed and vertical speed indicators; 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 an annunciation of pitot heater failure. The pitot heater failure annunciation requirement does not apply to those helicopters with a maximum approved passenger seating configuration (MAPSC) of 9 or less or a maximum certificated take-off mass (MCTOM) of 3 175 kg or less and issued with an individual Certificate of Airworthiness prior to 1 August 1999 (see AMC OPS3.652(d) and (m)(2));

(3) A vertical speed indicator;

(4) A slip indicator;

(5) An attitude indicator; and

(6) A gyroscopic direction indicator for VFR night and a magnetic gyroscopic direction indicator for IFR.

(n) For IFR operations, 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.

OPS3.655 Additional equipment for single pilot operation under IFR.

(See AMC OPS3.655)

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.

OPS3.660 Radio Altimeters

(a) An operator shall not operate a helicopter on a flight over water;

(1) when operating out of sight of the land; or

(2) when the visibility is less than 1 500 m; or

(3) at night; or

(4) at a distance from land corresponding to more than 3 minutes at normal cruising speed, unless that helicopter is equipped with a radio altimeter with

an audio voice warning, or other means acceptable to CARC, operating below a preset height and a visual warning capable of operating at a height selectable by the pilot.

OPS3.665 Reserved

OPS3.670 Airborne Weather Radar Equipment

An operator shall not operate a helicopter with a maximum approved passenger seating configuration (MAPSC) 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.

OPS3.675 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.

OPS 3.680 Reserved

OPS3.685 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.

OPS3.690 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 crew member station;

(3) Be readily accessible for use from each of the required flight crew stations in the flight crew compartment; and in addition for cabin crew members:

(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. (See AMC JCAR ops 3.690(b)(6)).

(6) Have a means for the recipient of a call to determine whether it is a normal call or an emergency call (See AMC OPS3.690(b)(6)).

OPS3.695 Public address system.

(a) Except as in (c) below, an operator shall not operate a helicopter with a maximum approved passenger seating configuration [(MAPSC)] 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 signaling 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 10 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.

(c) For helicopters with a maximum approved passenger seating configuration (MAPSC) of more than 9 but less than 19, the Public Address System is not required if:

(1) the helicopter is designed without a bulkhead between pilot and passengers; and

(2) the operator is able to demonstrate that when in flight, the pilot's voice is audible and intelligible at all passengers seats.

OPS3.700 Cockpit voice recorders-1

(See AC- OPS3.700)

(a) An operator shall not operate a helicopter first issued with an individual Certificate of Airworthiness, on or after 1 August 1999, which has a maximum certificated take-off mass (MCTOM) over 3 175 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 crew by radio;

(2) The aural environment of the cockpit including, without interruption, the audio signals received from each crew microphone in use;

(3) Voice communications of crew members using the crew members interphone system;

(4) Voice or audio signals identifying navigation or approach aids introduced into a headset or speaker; and

(5) Voice communications of crew members 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 7 000 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. (See AC OPS3.700(e))

OPS3.705 Cockpit voice recorders-2

(See AC OPS3.705)

(a) An operator shall not operate a helicopter which has either:

a maximum certificated take-off mass (MCTOM) of over 3175 kg, but not more than 7000 kg, and first issued with an individual Certificate of Airworthiness between 1 January 1987 and 31 July 1999 inclusive, or a MCTOM of over 7000 kg and first issued with an individual Certificate of Airworthiness up to and including 31 July 1999; unless these are equipped with a cockpit voice recorder which records with reference to a timescale:

(1) Voice communications transmitted from or received by the crew by radio;

(2) The aural environment of the cockpit, including where practicable, without interruption, the audio signals received from each crew microphone in use;

(3) Voice communications of crew members using the crew member's interphone system;

(4) Voice or audio signals identifying navigation or approach aids introduced into a headset or speaker;

(5) Voice communications of crew members 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. See AC OPS3.700(e)

(f) Helicopters with a maximum certificated take-off mass (MCTOM) over 3 175 kg but not more than 7 000 kg operated for the purpose of HEMS on or before [31 July 1999], may continue to be operated for the purpose of HEMS without being equipped with a cockpit voice recorder until 31 December 2010, if acceptable to CARC.

OPS3.715 Flight data recorders-1

(See Appendix 1 to OPS3.715/3.720)

(See AC OPS3.715/3.720)

(a) An operator shall not operate any helicopter first issued with an individual Certificate of Airworthiness on or after 1 August 1999 which has a maximum certificated take-off mass (MCTOM) over 3 175 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) For helicopters with a maximum certificated take-off mass (MCTOM) over 3 175 kg but not over 7 000 kg] the parameters listed in Table A of Appendix 1;

(2) For helicopters with a maximum certificated take-off mass over 7 000 kg, the parameters listed in Table B of Appendix 1, except that, if acceptable to CARC, parameter 19 need not be recorded, when any of the following conditions are met:

(i) The sensor is not readily available,

(ii) A change is required in the equipment that generates the data;

(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; and

(4) For helicopters equipped with electronic display systems, the parameters listed in Table C of Appendix 1.

(d) Data must be obtained from [helicopter 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 (See AC OPS3.700(e)).

OPS3.720 Flight data recorders-2

(See Appendix 1 to OPS3.715/3/720)

(See AC OPS3.715/3.720)

(a) An operator shall not operate any helicopter first issued with an individual Certificate of Airworthiness on or after 1 January 1989, up to and including 31 July 1999, which has a maximum certificated take-off mass (MCTOM) over 7 000 kg or a maximum approved passenger seating configuration (MAPSC) of more than 9, 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. For helicopters not equipped with a flight data recorder on or before 31 July 1999 compliance with this requirement may be delayed until 1 January 2005.

(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) [For helicopters with a maximum certificated take-off mass (MCTOM) of 7 000kg or less and with a maximum approved passenger seating configuration (MAPSC) of more than 9 the parameters listed in Table A of Appendix 1.

(2) For helicopters with a maximum certificated take-off mass (MCTOM) over 7 000 kg [the parameters listed in Table B of Appendix 1, except that, if acceptable to CARC, parameter 19 need not be recorded, when any of the following conditions are met:

(i) The sensor is not readily available,

(ii) A change is required in the equipment that generates the data.

(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; and

(4) For helicopters equipped with electronic display systems, the parameters listed in Table C of Appendix 1.

(d) Individual parameters that can be derived by calculation from the other recorded parameters, need not be recorded if acceptable to CARC.

(e) Data must be obtained from aircraft sources which enable accurate correlation with information displayed to the flight crew.

(f) 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.

(g) The flight data recorder must have a device to assist in locating that recorder in water.

(h) In complying with this section, the flight data recorder may be combined with the cockpit voice recorder. (See AC OPS3.700(e)).

OPS3.725 Reserved

OPS3.730 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 a JAA member state or elsewhere up to and including 31 July 1999 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 a JAA member state or elsewhere on or after 1 August 1999, 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.

OPS3.731 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.

OPS3.735-740 Reserved

OPS3.745 First-Aid Kits

(See AMC OPS3.745)

(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.

OPS3.750 -773 Reserved

OPS3.775 Supplemental oxygen, Non-pressurized helicopters

(See Appendix 1 to OPS3.775)

(a) General

(1) An operator shall not operate a non-pressurized 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.

OPS3.780-789 Reserved

OPS3.790 Hand fire extinguishers

(See AMC OPS3.790)

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, CBrClF2), 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

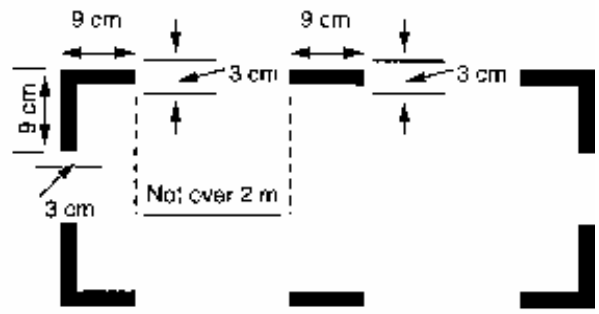
(e) There must be at least the following number of hand fire extinguishers conveniently located to provide adequate availability for use in each passenger compartment.

Passenger compartment seating capacity	**Minimum number of Fire Extinguishers**
7 to 30	1
31 to 60	2
61 to 200	3

OPS3.795 Reserved

OPS3.800 Marking of break-in points

An operator shall ensure that, if areas of the fuselage suitable for break-in by rescue 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:



OPS3.805 Reserved

OPS3.810 Megaphones

(See AMC OPS3.810)

An operator shall not operate a helicopter with a total maximum approved passenger seating configuration (MAPSC) of more than 19 unless it is equipped with portable battery-powered megaphones readily available for use by crew members during an emergency evacuation.

OPS3.815 Emergency lighting

(a) An operator shall not operate a helicopter which has a maximum approved passenger seating configuration (MAPSC) 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.

OPS3.820 Automatic Emergency Locator Transmitter

(See IEM OPS3.820)

(a) An operator shall not operate a helicopter unless it is equipped with an automatic

Emergency Locator Transmitter (ELT)

(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 OPS3.480(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 [shall] ensure that all ELTs are capable of transmitting simultaneously on 121.5MHz and 406 MHz, are coded in accordance with ICAO Annex 10 and are registered with the national agency responsible for initiating Search and Rescue or another nominated agency.

OPS3.825 Life Jackets

(See IEM OPS3.825)

(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.

OPS3.827 Crew Survival Suits

(See AC OPS3.827)

(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 estimated survival time unless each member of the crew is wearing a survival suit.

(b) An operator shall not operate a helicopter in Performance Class 3 on a flight over water beyond auto rotational or safe forced landing distance from land 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, unless each member of the crew is wearing a survival suit.

OPS3.830 Life-rafts and survival ELTs on extended overwater flights

(See AMC OPS3.830)

(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 3 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 liferafts 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 on the helicopter.

(See AMC OPS3.830(a)(2));

(3) At least one survival Emergency Locator Transmitter (ELT(S)) for each liferaft carried (but not more than a total of 2 ELTs are required), capable of transmitting on the distress frequencies prescribed in Appendix 1 to OPS3.830.

(See also AMC OPS3.830(a)(3));

(4) Emergency exit illumination; and

(5) Life saving equipment including means of sustaining life as appropriate to the flight to be undertaken.

OPS3.835 Survival equipment

(See IEM OPS3.835)

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) Signaling 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 Appendix 1 to OPS3.830 (see also AMC OPS3.830(a)(3)); and

(c) Additional survival equipment for the route to be flown taking account of the number of persons on board (see AMC OPS3.835(c)).

OPS3.837 Additional requirements for helicopters operating to or from helidecks

located in a hostile sea area (as defined in OPS3.480(a)(13)(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 (see AC OPS3.827);

(2) All liferafts carried in accordance with OPS3.830 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 (See IEM OPS3.837(a)(2));

(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-jettison able 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 CARC as suitable for the purpose of underwater escape, are equipped so as to be operable in an emergency;

(7) Lifejackets are worn at all times; unless the passenger or crew member is wearing an integrated survival suit that meets the combined requirement of the survival suit and lifejacket which is acceptable to CARC.

OPS3.840 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.

OPS3.843 All helicopters on flights over water – Ditching

(a) An operator shall not operate a helicopter in Performance Class 1 or 2 on a flight over water in a hostile environment 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 certificated in accordance with ditching provisions.

(b) An operator shall not operate a helicopter in Performance Class 1 or 2 on a flight over water in a non-hostile environment 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 certificated in accordance with ditching provisions; or is fitted with emergency flotation equipment.

(c) An operator shall not operate a helicopter in Performance Class 2, when taking-off or landing over water, unless that helicopter is; so designed for landing on water; or is certificated in accordance with ditching provisions; or is fitted with emergency floatation equipment. (See IEM OPS3.843(c)).

Except where, for the purpose of minimizing exposure, the landing or take-off at a HEMS operating site located in a congested environment is conducted over water – unless otherwise required by CARC.

(d) An operator shall not operate a helicopter in Performance Class 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 certificated in accordance with ditching provisions; or is fitted with emergency floatation equipment.

Appendix 1 to OPS3.715/3.720

Flight data recorders – 1 and 2 – List of parameters to be recorded:

Table A - Helicopters with a maximum certificated take-off mass (MCTOM) of 7 000 kg or less.

No	PARAMETER
1	Time or relative time count
2	Pressure altitude
3	Indicated airspeed
4	Heading
5	Normal acceleration
6	Pitch attitude
7	Roll attitude
8	Manual radio transmission keying
9	Power on each engine (free power turbine speed and engine torque)/ cockpit power position (if applicable)
10a 10b	Main rotor speed Rotor brake (if installed)
11 11a 11b 11c 11d 11e 11f	Primary flight controls - Pilot input and control output position (if applicable) Collective pitch. Longitudinal cyclic pitch Lateral cyclic pitch Tail rotor pedal Controllable stipulator Hydraulic selection
12	Warnings
13	Outside temperature
14	Auto pilot engagement status
15	Stability augmentation system engagement

Table B - Helicopters with a max. certificated take-off mass (MCTOM) of over 7 000 kg.

No	PARAMETER
1	Time or relative time count
2	Pressure altitude
3	Indicated airspeed
4	Heading
5	Normal acceleration
6	Pitch attitude
7	Roll attitude
8	Manual transmission keying
9	Power on each engine (free power turbine speed and engine torque)/ cockpit control position (if applicable)
10a 10b	Main rotor speed Rotor brake (if installed)

Appendix 1 to OPS3.715/3.720 (continued)

No	PARAMETER
11 11a 11b 11c 11d 11e 11f	Primary flight controls - Pilot input and control output position (if applicable) Collective pitch Longitudinal cyclic pitch Lateral cyclic pitch Tail rotor pedal Controllable stipulator Hydraulic selection
12	Hydraulics low pressure
13	Outside air temperature.
14	AFCS mode and engagement status
15	Stability augmentation system engagement
16	Main gear box oil pressure
17	Main gear box oil temperature
18	Yaw rate or yaw acceleration
19	Indicated sling load force (if installed)
20	Longitudinal acceleration (body axis)
21	Lateral acceleration
22	Radio altitude
23	Vertical beam deviation (ILS glide path or MLS elevation)
24	Horizontal beam deviation (ILS Localizer or MLS azimuth)
25	Marker beacon passage
26	Warnings
27	Reserved (Nav receiver frequency selection is recommended)
28	Reserved (DME distance is recommended)
29	Reserved (navigation data is recommended)
30	Landing gear or gear selector position

Table C - Helicopters equipped with electronic display systems

No	Parameter
6	Selected barometric setting (Each pilot station)
7	Selected altitude
8	Selected speed
9	Reserved
10	Selected vertical speed
11	Selected heading
12	Selected flight path
13	Selected decision height
14	EFIS display format
15	Multi function (engine/alerts display format

Appendix 1 to OPS3.775

Supplemental Oxygen for non-pressurized Helicopters

Table 1

(a)	**(b)**
SUPPLY FOR	DURATION AND PRESSURE ALTITUDE
1: All occupants of flight deck seats on flight deck duty	Entire flight time at pressure altitudes above 10 000 ft.
2. All required cabin crew members	Entire flight time at pressure altitudes above 13 000 ft and for any period exceeding 30 minutes at pressure altitudes above 10 000 ft but not exceeding 13.000 ft.
3. 100% of passengers (See Note)	Entire flight time at pressure altitudes above 13 000 ft.
4. 10% of passengers (See Note)	Entire flight time after 30 minutes at pressure altitudes greater than 10 000 ft but not exceeding 13 000 ft.

Note: For the purpose of this table ‘passengers’ means passengers actually carried and includes infants under the age of 2.

Appendix 1 to OPS3.830

Emergency Locator Transmitter (ELT(S))

(See OPS3.380 and OPS3.835)

(a) All ELT(S) shall be capable of transmitting simultaneously on 121.5 MHz and 406 MHz, be coded in accordance with ICAO Annex 10 and be registered with the national agency responsible for initiating Search and Rescue, or another nominated agency.

SUBPART- L

COMMUNICATION AND NAVIGATION EQUIPMENT

OPS3.845 General introduction

(See IEM OPS3.845)

(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 (OPS3.030 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 PART 39 ,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 OPS3 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.

OPS3.850 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.

OPS3.855 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.

OPS3.860 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 fulfil 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) When mandated by airspace requirements, reply to SSR interrogations with a pressure-altitude reporting transponder which operates in accordance with ICAO Annex 10, Volume IV)

OPS3.865 Communication and Navigation equipment for operations under IFR, or under VFR over routes not navigated by reference to visual landmarks

(See AMC OPS3.865)

(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) When mandated by airspace requirements, a pressure-altitude reporting transponder which operates in accordance with ICAO Annex 10, Volume IV.

(c) *Navigation equipment*. An operator shall ensure that navigation equipment:

(1) Comprises not less than:

(i) Two independent navigation 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) Two VOR receiving systems on any route, or part thereof, where navigation is based only on VOR signals; and

(v) Two ADF systems 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. (See also IEM OPS3.243).

(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 CARC. The reliability and the accuracy of alternative equipment must allow safe navigation for the intended route.

(e) An operator shall ensure that VHF communication equipment, ILS Localizer and VOR receivers installed on helicopters to be operated under IFR are of a type that has been approved as complying with the FM immunity performance standards (see AC OPS3.865(e)).

(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.

SUBPART- M
HELICOPTER MAINTENANCE

OPS3.875 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 CARC Regulation;PART-145, except that pre-flight inspections need not necessarily be carried out by the PART-145 organization.

(b) Helicopter continuing airworthiness requirements needed to comply with the operator certification requirements in OPS3.180 are those set up in CARC Regulation, PART M .

OPS3.880-3.935 Reserved

SUBPART- N
FLIGHT CREW

Note 1: FCL 2 is referred to in this Subpart. Where this is the case, it should be noted that, until FCL has been implemented, the equivalent national aviation regulations will apply.

Note 2: 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 JCAR 61 Annex 4 FSTD (H).

OPS3.940 Composition of Flight Crew

(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 licence acceptable to CARC and are suitably qualified and competent to conduct the duties assigned to them;

(4) Procedures are established, acceptable to CARC, to prevent the crewing together of inexperienced flight crew members; (See AMC OPS3.940(a)(4)); 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.

(6) When engaging the services of flight crew members who are self-employed and/or working on a freelance or part-time basis, the requirements of Subpart N are complied with.

(7) For crew members serving the operator as a commander, initial operator’s Crew Resource Management (CRM) training shall be completed before commencing unsupervised line flying.

(b) Pilots. An operator shall ensure that:

(1) Commanders and co-pilots on an IFR flight hold a valid instrument rating, except that the holder of a pilot license may fly in VMC at night, provided he is appropriately qualified for the circumstances, airspace and flight conditions in which the flight is conducted. This qualification requirement must be entered in the Operations Manual and be acceptable to CARC.(See IEM to OPS3.940(b)(1)).

(2) For IFR operations using helicopters with a maximum approved passenger seating configuration (MAPSC) of more than 9:

(i) The minimum flight crew is two qualified pilots; and

(ii) The commander holds a valid Airline Transport Pilot's Licence (Helicopter) (ATPL(H));

(3) For operations using helicopters with a maximum approved passenger seating configuration (MAPSC) of more than 19:

(i) The minimum flight crew is two qualified pilots;

(ii) The commander holds a valid Airline Transport Pilot's Licence (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 OPS3.940(c) are satisfied.

OPS3.943 Initial Operator's Crew Resource Management(CRM) training

(See AC No. 1 to OPS3.943)

(See AC No. 2 to OPS3.943)

(a) When a flight crew member has not previously completed initial Operator's Crew Resource Management (CRM) training (either new employees or existing staff), then the operator shall ensure that the flight crew member completes an initial CRM training course. New employees shall complete initial Operator's CRM Training within their first year of joining an operator.

(b) Initial CRM training shall be conducted by suitably qualified personnel (See ACJ 1 OPS3.943).

(c) Initial CRM training is conducted in accordance with a detailed course syllabus included in the Operations Manual, and shall at least the following items:

(1) Human error and reliability, error chain, error prevention and detection;

(2) Company safety culture, Standard Operating Procedures (SOPs), organizational factors;

(3) Stress, stress management, fatigue and vigilance;

(4) Information acquisition and processing, situation awareness, workload management;

(5) Decision making;

(6) Communication and co-ordination inside and outside the cockpit;

(7) Leadership and team behavior, synergy;

(8) Automation and philosophy of the use of Automation (if relevant to the type);

(9) Specific type-related differences;

(10) Case based studies;

(11) Additional areas which warrant extra attention, as identified by the accident prevention and flight safety Program(see OPS3.037).

OPS3.945 Conversion Training and checking

(See AMC OPS3.945), (See IEM OPS3.945)

(See AC-No.1 to OPS3.943),(See AC-No. 2 to OPS3.943)

(a) An operator shall ensure that:

(1) A flight crew member completes a Type Rating course which satisfies the applicable requirements of ANNEX 2 to Part 61 of JCAR 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 personnel in accordance with a detailed course syllabus included in the Operations Manual

(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 OPS3.985;

(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 OPS3.965(b) and the training and checks required by OPS3.965(d) before commencing line flying under supervision;

(7) Upon completion of line flying under supervision, the check required by OPS3.965(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 unless otherwise approved by CARC (See IEM OPS3.945(a)(8)); and

(9) Elements of CRM training are integrated into the conversion course. (See AC-1 OPS3.943 and AC-2 OPS3.943 and AC OPS3.945(a)(9) and IEM OPS3.945(a)(9)).

(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 FCL 2.

(c) The operator's conversion course and the Type Rating course required by FCL 2 may be combined.

OPS3.950 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.

OPS3.955 Upgrade to commander (See Appendix 1 to OPS3.955)

(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.

OPS3.960 Commanders – Minimum Qualification Requirements

(a) The minimum qualification requirements for a commander are either:

(1) An Airline Transport Pilot Licence (Helicopter) (ATPL(H)); or

(2) A Commercial Pilot's Licence (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 PART-FCL) and 100 hours under IFR. The 300 hours as pilot in command may be substituted by copilot 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.

OPS3.965 Recurrent Training and Checking

(See Appendix 1 to OPS3.965), (See AC-No. 1 to OPS3.943)

(See AC-No. 2 to OPS3.943),(See AMC OPS3.965),(See IEM OPS3.965)

(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 flight crew member operates;

(2) A recurrent training and checking Program is established in the Operations Manual and approved by the Authority;

(3) Recurrent training is conducted by the following personnel:

(i) Ground and refresher training - by suitably qualified personnel;

(ii) Helicopter/flight simulator training - by a Type Rating Instructor (TRI) or a Flight Instructor (FI) with the appropriate type rating, or, in the case of the flight simulator content, a Synthetic Flight Instructor (SFI), providing that the TRI or the SFI satisfies the operator's experience and knowledge requirements sufficient to instruct on the items specified in paragraphs (a)(1)(i)(A) and (B) of Appendix 1 to OPS3.965;

(iii) Emergency and safety equipment training - 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 (TRE), or a Flight Examiner (FE) with the appropriate type rating, nominated by the operator and acceptable to CARC or, a Synthetic Flight Examiner (SFE) if the check is conducted in a flight simulator approved for the purpose; and:

(ii) Line checks By suitably qualified] commanders trained in the assessment of CRM skills (see AC-2 OPS3.943 paragraph 4)] nominated by the operator and acceptable to CARC;

(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) CRM. An operator shall ensure that:

(1) Elements of CRM are integrated into all appropriate phases of the recurrent training, and;

(2) Each flight crew member undergoes specific modular CRM training. All major topics of the initial CRM training shall be covered over a period not exceeding 3 years;

(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.

OPS3.968 Pilot qualification to operate in either pilot's seat

(See Appendix 1 to OPS3.968), (See AMC OPS3.965)

(See IEM OPS3.965)

(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 CARC.

OPS3.970 Recent experience

(a) An operator shall ensure that, except as permitted in sub-paragraph (b) below:,

(1) A pilot does not operate a helicopter unless he has carried out at least three takeoffs, 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.

(2) For night VMC operations:

(i) a pilot without a valid instrument rating has carried out at least three take-offs, three circuits and three landings at night in the preceding 90 days. This recency may be obtained in an STD.

(ii) a pilot with a valid instrument rating satisfies the night recent experience requirement if he has carried out at least three instrument approaches in the preceding 90 days. This recency may be obtained in a STD.

(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.

OPS3.975 Route/Role/Area; Competence and Qualification

(See AMC OPS3.975)

(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.

OPS3.978 Reserved

OPS3.980 Operation on more than one type or variant:

(See AMC OPS3.980)

(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 CARC are included in the Operations Manual.

OPS3.985 Training Records

(See IEM OPS3.985)

(a) An operator shall:

(1) Maintain records of all training, checking and qualification prescribed in OPS3.945, 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 OPS3.940(c)

Single pilot operations under IFR or at night

(a) Helicopters referred to in OPS3.940(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 OPS3.965 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 OPS3.960.

(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 a helicopter [approved] in the single-pilot role. This requirement may be replaced by an IFR instrument approach check on the helicopter or an STD.

Note: Additional equipment requirements for alleviating pilot workload are prescribed in OPS3.655.

Appendix -1 to OPS3.955

Upgrading to Commander

(a) Upgrade Training Course:

(1) The command course required by OPS3.955(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 CRM. (See AC-1 JCAR ops 3.943).

(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 JCAR Ops 3.945.

(ii) Additional sectors shall be required for a pilot transitioning on to a new type of helicopter.

Appendix 1 to OPS3.965

Recurrent Training and Checking – Pilots

(See IEM to Appendix 1 to OPS3.965), (See AC-No. 1 to OPS3.943)

(See AC-No. 2 to OPS3.943)

(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, where fitted;

(B) Actual donning of protective breathing equipment, where fitted;

(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 CARC 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 in the use of the life-rafts where fitted, or, demonstration and use of the life rafts where they are fitted for extended overwater operations (See AMC to Appendix 1 to OPS3.965, sub-paragraph (a)(3)(iii)(D); and

(E) First aid; appropriate to the helicopter type, the kind of operation and crew complement (particularly in the case when crew members are not carried).

(4) CRM.

(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 preflight 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 CRM skills for the purpose of:

(A) Providing feedback to the crew collectively and individually; and

(B) improving the CRM training system.

(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) The person conducting a line check, who is described in OPS33.965(a)(4)(ii), shall occupy an observer's seat whenever practical.

(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 OPS3.968

Pilot qualification to operate in either pilot's seat.

(a) Commanders whose duties also require them to carry out the duties of the co-pilot, or commanders required to conduct training or examining duties, [shall complete their proficiency checks respectively from left and right hand seats, on alternate proficiency checks, provided that when the type rating proficiency check is combined with the operator proficiency check the commander completes his training or checking from his normally occupied seat. All checks, from whatever seat, must be completed as prescribed in OPS3.965(b).

(b) When engine-out maneuvers are carried out in a helicopter, the engine failure must be simulated. When carried out in a single engine helicopter, the engine failure must be simulated and the training captain must carry out the authoritative landing respectively from left and right hand seats on alternate proficiency checks.

(c) When operating in the co-pilot's seat, the checks required by OPS3.965 and OPS3.968 for operating in the commander's 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 OPS3.965(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 OPS3.965(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
CREW MEMBERS OTHER THAN FLIGHT CREW

OPS3.988 Applicability

(See Appendix 1 to OPS3.988)

An operator shall ensure that all crew members, other than flight crew members, assigned by the operator to duties in the helicopter, comply with the requirements of this Subpart except for cabin crew members who will comply only with the requirements in Appendix 1 to OPS3.988.

OPS3.990 Reserved.

OPS3.995 Minimum requirements

(a) An operator shall ensure that each 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 (see AC OPS3.995(a)(2)); and

(3) Remains medically fit to discharge the duties specified in the Operations Manual.

(b) An operator shall ensure that each crew member is competent to perform his duties in accordance with procedures specified in the Operations Manual.

OPS3.1000 Reserved

OPS3.1005 Initial training

(See AC OPS3.1005)

An operator shall ensure that each crew member successfully completes initial training (which shall include appropriate elements of OPS3.943), accepted by CARC, and the checking prescribed in OPS3.1025 before undertaking conversion training.

OPS3.1010 Conversion and Differences Training

(See AC OPS3.1010)

(a) An operator shall ensure that each crew member has completed appropriate training, as specified in the Operations Manual, before undertaking assigned duties as follows:

(1) *Conversion training*. A conversion course must be completed before being:

(i) First assigned by the operator to operate as a crew member; or

(ii) Assigned to operate another helicopter type; and

(2) *Differences training*. Differences training must be completed before operating:

(i) On a variant of a helicopter type currently operated; or

(ii) With different safety equipment, safety equipment location, equipment relevant to the crew member's duties, or normal and emergency procedures on currently operated helicopter types or variants.

(b) An operator shall determine the content of the conversion or differences training taking account of the crew member's previous training as recorded in the crew member's training records required by OPS3.1035.

(c) An operator shall ensure that:

(1) Conversion training is conducted in a structured and realistic manner;

(2) Differences training is conducted in a structured manner; and

(3) Conversion training, and if necessary differences training, includes the use of all relevant equipment (including safety equipment) and emergency procedures applicable to the type or variant of helicopter and involves training and practice on either a representative training device or on the actual helicopter.

(4) Elements of CRM training are integrated into the conversion course.

OPS3.1012 Familiarization flights

An operator shall ensure that, following completion of conversion training, each crew member undertakes a familiarization flight prior to operating as one of the crew members required by OPS3.

OPS3.1015 Recurrent training

(See AC OPS3.1015)

(a) An operator shall ensure that each 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.

(b) An operator shall ensure that the recurrent training and checking program accepted by CARC includes theoretical and practical instruction, together with individual practice.

(c) The period of validity of recurrent training and the associated checking required by OPS3.1025 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.

(d) An operator shall ensure that:

(1) Elements of CRM are integrated into all appropriate phases of the recurrent training; and

(2) Each crew member undergoes specific modular CRM training. All major topics of the initial CRM training shall be covered over a period not exceeding 3 years.

OPS3.1020 Refresher Training

(See AC OPS3.1020)

(a) An operator shall ensure that each crew member who has been absent from all flying duties for more than 6 months completes refresher training specified in the Operations Manual.

(b) An operator shall ensure that when crew member has not been absent from all flying duties, but has not, during the preceding 6 months, undertaken duties on a type of helicopter as a crew member, before undertaking such duties on that type, the crew member either:

(1) Completes refresher training on the type; or

(2) Operates two re-familiarization sectors.

OPS3.1025 Checking

(See AC OPS3.1025)

(a) An operator shall ensure that during or following completion of the training required by OPS3.1005, 3.1010 and 3.1015, each 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 CARC.

(b) An operator shall ensure that each crew member undergoes checks as follows:

(1) *Initial training*. (See AC OPS3.1005);

(2) *Conversion and Differences training*. (See AC OPS3.1010); and

(3) *Recurrent training*. (See AC OPS3.1015).

OPS3.1030 Operation on more than one type or variant

(a) An operator shall ensure that each crew member does not operate on more than three helicopter types except that, with the approval of CARC, the 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.

OPS3.1035 Training records:

(a) An operator shall:

(1) Maintain records of all training and checking required by OPS3.1005, 3.1010, 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 crew member concerned.

Appendix -1 to OPS3.988Cabin Crew members

(a) Applicability.

An operator shall ensure that all cabin crew members, assigned by the operator to duties in the passenger compartment of a helicopter comply with the requirements of ANNEX 1 Subpart O, except for the variations contained in this appendix.

(b) Interpretation of terms.

When applying the text of ANNEX 1 Subpart O, the following text shall be interpreted, for the purpose of this appendix, as indicated:

(1) In ANNEX 1.988, the use of the term crew members is not to be interpreted to mean crew members in the sense of OPS3 Subpart O.

(2) For aeroplane read helicopter.

(3) The term airport(s) includes heliport(s).

(4) Reference to any other subpart of ANNEX 1 means the appropriate subpart of OPS3 .

(c) Alleviation.

The following rules do not apply to helicopter cabin crew members:

(1) Appendix 1 to OPS3 1.1010 Conversion and Differences training:

(i) paragraph (d); evacuation slide training;

(ii) paragraph (e)(2)(ii); severe air turbulence;

(iii) paragraph (e)(2)(iii) sudden decompression

(iv) paragraph (h)(1); slides;

(v) paragraph (h)(2); slide rafts;

(vi) paragraph (h)(4); dropout oxygen.

SUBPART -P
MANUALS, LOGS AND RECORDS

OPS3.1040 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, CARC. (See IEM OPS3.1040(b).)

(c) Unless otherwise approved by CARC, 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. (See IEM OPS3.1040(c).)

(d) Should it become necessary for an operator to produce new Operations Manuals or major parts/volumes thereof, he must comply with sub-paragraph (c) above. In all other cases, an operator must comply with sub-paragraph (c) above as soon as possible.

(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 Authority 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 OPS3 , 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 CARC.

(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. The design of the manual shall observe Human factors and CRM principles.

(m) An operator may be permitted by CARC 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 OPS3.130.

OPS3.1045 Operations Manual structure and contents

(See Appendix 1 to OPS3.1045), (See AMC OPS3.1045)

(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 OPS3 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 CARC. (See IEM OPS3.1045(c).)

OPS3.1050 Helicopter Flight Manual

An operator shall keep a current approved Helicopter Flight Manual or equivalent document for each helicopter that it operates.

OPS3.1055 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) (see IEM OPS3.1055 (a)(12)).

(b) An operator may be permitted not to keep a helicopter journey log, or parts thereof, by CARC if the relevant information is available in other documentation. (See IEM OPS3.1055(b).)

OPS3.1060 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 subparagraphs (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.

OPS3.1065 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 OPS3.1065.

OPS3.1070 Operator's maintenance management exposition

An operator shall keep a current approved maintenance management exposition as prescribed in PART-M – M.A.704 Continuing airworthiness management exposition.

OPS3.1071 Helicopter Technical log

An operator shall keep a helicopter technical log as prescribed in Part-M – M.A.306 Operator's technical log system.

Appendix 1 to OPS3.1045

Operations Manual Contents

(See IEM to Appendix 1 to OPS3.1045)

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 postholder responsible for flight operations, the maintenance system, crew training and ground operations, as prescribed in OPS3 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 OPS3.175(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) Licence 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 CARC.

A description of the powers of CARC [and guidance to staff on how to facilitate inspections by CARC personnel.

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 licence, 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) Psychoactive substances including but not limited to:

(i) Anti depressants;

(ii) Alcohol and other intoxicating liquids;

(iii) Narcotics;

(iv) Drugs; and

(v) Sleeping tablets.

See also PART 67 (medical)).

(b) Pharmaceutical preparations;

(c) Immunization;

(d) Diving [involving underwater pressure breathing devices;

(e) Blood/bone marrow] donation;

(f) Meal precautions prior to and during flight;

(g) 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 OPS3 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 OPS3 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 Centre of Gravity.

The general principles of mass and centre 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) Navigation over designated areas.

(c) RNAV: A description of the relevant RNAV procedures specified in OPS3 Subpart C;

(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 blank

8.3.6 Intentionally 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) Windshear;

(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 Authority 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 recognising 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 OPS3.285.

8.3.17 Intentionally blank

8.4 AWO.

A description of the operational procedures associated with All Weather Operations. (See OPS3 Subparts D &E).

8.5 Reserved.

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 OPS3.1215; 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 non-confidential nature which must include the authority and responsibilities of operations personnel. Policies and procedures for handling and reporting crime on board such as

unlawful interference, sabotage, bomb threats, and hijacking must also be included.

10.2 A description of preventative security measures and training.

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

11 HANDLING, NOTIFYING AND REPORTING OCCURRENCES:

Procedures for the handling, notifying and reporting occurrences. This section must include:

(a) Definitions of occurrences and of the relevant responsibilities of all persons involved;

(b) Illustrations of forms used for reporting all types of occurrences (or copies of the forms themselves), instructions on how they are to be completed, the addresses to which they should be sent and the time allowed for this to be done;

(c) [In the event of an accident, descriptions of which company departments, CARC and other organizations that have to be notified, how this will be done and in what sequence;

(d) [Procedures for verbal notification to air traffic service units of incidents involving ACAS RAs, bird hazards, dangerous goods and hazardous conditions;

(e) [Procedures for submitting written reports on air traffic incidents, ACAS RAs, bird strikes, dangerous goods incidents or accidents, and unlawful interference;

(f) [Reporting procedures to ensure compliance with OPS3.085(b) and 3.420.

These procedures must include internal safety related reporting procedures to be followed by crew members, designed to ensure that the commander is informed immediately of any incident that has endangered, or may have endangered, safety during flight and that he is provided with all relevant information.

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 positions 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.

13 LEASING.

A description of the operational arrangements for leasing, associated procedures and management responsibilities.

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 (e.g. PART-27, PART-29, ICAO Annex 16 (PART-34 and PART-36) etc.);

(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 centre 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 EMERGENCY PROCEDURES

2.1 The emergency procedures and duties assigned to the crew, the appropriate checklists, the system for use of the checklists and a statement covering the necessary co-ordination procedures between flight and other crew [members (the design and utilization of which shall observe Human factors and CRM principles)].

The following emergency procedures and duties must be included:

(a) Crew Incapacitation;

(b) Fire and Smoke Drills;

(c) Lightning Strikes;

(d) Distress Communications and alerting ATC to Emergencies;

(e) Engine failure;

(f) System failures;

(g) Guidance for Diversion in case of Serious Technical Failure;

(h) AVAD warning;

(i) Windshear;

(j) Emergency Landing/Ditching;

3 NORMAL PROCEDURES

3.1 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

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 CARC 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 centre of gravity for the types, variants or individual helicopters used by the operator; and

(d) Dry Operating mass and corresponding centre 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 OPS3.255

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 despatched 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 coordination 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. (See IEM to Appendix 1 to OPS3.1045).

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 blank

(l) Special heliport limitations (performance operating etc.).

D: TRAINING

1.Training syllabi and checking programs for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight.

2.Training syllabi and checking programs must include:

2.1 For flight crew. All relevant items prescribed in OPS3 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 OPS3 Subpart R (Transport of Dangerous Goods by Air); and

(b) All relevant items prescribed in OPS3 , Subpart S (Security).

2.4 For operations personnel other than crew members (e.g. dispatcher, handling personnel etc.). All other relevant items prescribed in OPS3 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 OPS3.1065)

Appendix 1 to OPS3.1065

Document storage periods

An operator shall ensure that the following information/documentation is stored in an acceptable form, accessible to CARC, for the periods shown in the Tables below.

Note: Additional information relating to maintenance records is prescribed in PART-M – M.A.306(c) Operator's technical log system.

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 OPS3.135	
Operational flight plan	3 months
Helicopter Technical log	24 months after the date of the last entry
Route specific NOTAM/AIS briefing documentation if edited	3 months

by the operator	
Mass and balance documentation	3 months
Notification of special loads including written information to the commander about dangerous goods	3 months

Table 2 – Reports

Reports	
Journey log	3 months
Flight report(s) for recording details of any occurrence, as prescribed in OPS3.420, or any event which the commander deems necessary to report/record	3 months
Reports on exceedances of duty and/or reducing rest periods	3 months

Table 3 – Flight crew records

Flight Crew Records	
Flight, Duty and Rest time	15 months
Licence	As long as the flight crew member is exercising the privileges of the licence for the op
Conversion training and checking	3 years
Command course (including checking)	3 years
Recurrent training and checking	3 years
Training and checking to operate in either pilot's seat	3 years
Recent experience (OPS3.970 refers)	15 months
Route and aerodrome competence (OPS3.975 refers)	3 years
Training and qualification for specific operations when required by OPS3 (e.g. HEMS CATII/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 differences training (including checking)	As long as the cabin crew member is employed by the operator
Recurrent training and refresher (including checking)	Until 12 months after the cabin crew member has left the employ 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 OPS3.	Last 2 training records

Table 6 – Other records

Other records	
Quality System records	5 years
Dangerous Goods Transport Document	3 months after completion of the flight
Dangerous Goods Acceptance Checklist	3 months after completion of the flight.

SUBPART- Q

FLIGHT AND DUTY TIME LIMITATIONS AND REST REQUIREMENTS

Reserved

SUBPART –R

TRANSPORT OF DANGEROUS GOODS BY AIR

OPS3.1150 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 CARC; 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. (See IEM OPS3.1150(a)(3) & (a)(4).)

(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. (See IEM OPS3.1150(a)(3) & (a)(4).)

(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/ID numbers and that they are correctly classified, packed, marked, labeled 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) ID number.

A temporary identification number for an item of dangerous goods which has not been assigned a UN number.

(9) Over pack.

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.

(10) Packag*e*. The complete product of the packing operation consisting of the packaging and its contents prepared for transport.

(11) 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.

(12) 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.

(13) 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 burns, or any burns affecting more than 5% of the body surface; or

(vi) Involves verified exposure to infectious substances or injurious radiation.

(14) *State of Origin*.

The Authority in whose territory the dangerous goods were first loaded on an aircraft.

(15) *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.

(16) *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.

OPS3.1155 Approval to transport Dangerous Goods

(See IEM OPS3.1155)

An operator shall not transport dangerous goods unless approved to do so by CARC.

OPS3.1160 Scope

(a) An operator shall comply with the provisions contained in the Technical Instructions 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 State.

(See IEM OPS3.1160(a).)

(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 OPS3 or for operating reasons (see IEM OPS3.1160(b)(1));

(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 (see IEM OPS3.1160(b)(3));

(4) They are carried for use in flight for medical aid for a patient, provided that (see IEM OPS3.1160(b)(4)):

(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 (see IEM OPS3.1160(b)(5)).

(c) Articles and substances intended as replacements for those in (b)(1) and (b)(2) above shall be transported on a helicopter as specified in the Technical Instructions.

OPS3.1165 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 (see IEM OPS3.1165(b)(1)); or

(2) The Technical Instructions indicate they may be transported under an approval issued by the State of Origin.

OPS3.1170 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.

OPS3.1175 Packing

(See AMC OPS3.1175)

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 Authority.

OPS3.1180 Labeling and Marking

(a) An operator shall take all reasonable measures to ensure that packages, over packs and freight containers are labeled as specified in the Technical Instructions.

(b) An operator shall take all reasonable measures to ensure packages, over packs and freight containers are marked as specified in the Technical Instructions or as specified by CARC. (See AMC OPS3.1180(b).)

(c) Where dangerous goods are carried on a flight which takes place wholly or partly outside the territory of a State, labeling and marking must be in the English language in addition to any other language requirements.

OPS3.1185 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 a State, the English language must be used for the dangerous goods transport document in addition to any other language requirements.

Ops 3.1190 Reserved

OPS3.1195 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.

OPS3.1200 Inspection for Damage, Leakage or Contamination

(a) An operator shall ensure that:

(1) Packages, over packs 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, over packs 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, over packs 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.

OPS3.1205 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.

OPS3.1210 Loading Restrictions

(See AMC OPS3.1210(a))

(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 CARC.

(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.

OPS3.1215 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*

(see AMC OPS3.1215(b))

(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 (See Table 1 of Appendix 1 to OPS3.1065 for the document storage period).

(e) *Information in the Event of a helicopter Incident or Accident*

(See AMC OPS3.1215(e))

(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 authority of the State in which the helicopter accident occurred of any dangerous goods carried.

OPS3.1220 Training Programs

(See AMC OPS3.1220)

(See IEM OPS3.1220)

(a) An operator shall establish and maintain staff training Programs, as required by the Technical Instructions, which shall be approved by CARC.

(b) *Operators not holding a permanent approval to carry dangerous goods*.

An operator shall ensure that:

(1) Staff who are engaged in general cargo and baggage 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, how to identify them and what requirements apply to the carriage of such goods by passengers; 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
Package marking and labeling	X	X
Dangerous Goods in passengers baggage	X	X
Emergency procedures	X	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 and baggage 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, how to handle and load them and what requirements apply to the carriage of such goods by passengers;

(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
Limitations on Dangerous Goods in air transport	X	X		X	X
Classification of Dangerous Goods	X				
List of Dangerous Goods	X	X		X	
Packaging specifications and markings	X				
Storage and loading procedures	X	X	X	X	
Dangerous Goods in passengers baggage	X		X	X	X
Emergency procedures	X	X	X	X	X

Note: ‘x’ indicates an area to be covered.

(d) An operator shall ensure that all staff who receive training undertake a test to verify understanding of their responsibilities.

(e) An operator shall ensure that all staff who require dangerous goods training receive recurrent training at intervals of not longer than 2 years.

SUBPART -S
SECURITY

OPS3.1235 Security requirements

An operator shall ensure that all appropriate personnel are familiar, and comply, with the relevant requirements of the national security programs of the State of the operator.

OPS3.1240 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 such events should they occur.

OPS3.1245 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 designated local authority and CARC in the State of the operator.

OPS3.1250 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. An operator shall also support the checklist with guidance on the course of action to be taken should a bomb or suspicious object be found.

OPS3.1255 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.

SUBPART- T

AERIAL WORK

OPS3.1260 Commercial Aerial Work Operations for helicopters

(a) Terminology.

(1) Commercial Aerial Work: Helicopter operations for specialized tasks for remuneration and hire, not to be defined as commercial air transport. The specialized tasks are included but not limited to the following:

A: Aerial photography, filming and video work;

B: Transport of cargo outside the helicopter; e.g. under sling loads;

C: Pipeline and or electric power line surveillance;

D: Commercial Para dropping;

E: Aerial advertising; including panel towing;

F: Crop dusting;

G: Electric power line construction work;

H: Fire fighting e.g. water dropping;

I: Tree cutting

J; Aerobatic; demonstration flights;

K; Search and Rescue services;

L: Helicopter under any commercial contract; Etc.

(2) Local Operations. Flight conducted within a local and defined geographical area acceptable to CARC, which start and end at the same location on the same day.

ICAO definition:

Aerial work. An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

Aircraft. Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

(2a) Applicability:

(a) To flights immediately before, during, or immediately after an aerial work activity provided these flights are connected with that aerial work activity and in which, excluding crew members, no more than 6 persons indispensable to the aerial work activity are carried.

(b) To flights immediately before, during, or immediately after an aerial work activity provided these flights are connected with that aerial work activity and in which, excluding crew members, no more than 6 persons indispensable to the aerial work activity are carried.

(c) Local area operations with helicopters with a maximum certificated seating capacity of 6 passengers.

(3) Aerial work passenger: Person on board of the helicopter connected to the task the helicopter is contracted for or involved with:

(b) Approval. An operator wishing to conduct commercial aerial work operations in accordance with this Chapter must have the prior approval of CARC issuing the AOC for Aerial Work. Such an approval shall specify:

(1) The type of helicopter; and

(2) The type of specialized services.

(3) The geographical limitations of local operations in the context of this Chapter (see ACJ to Appendix 1 to OPS3.005(f) paragraph (b)(3)).

(c): Operating requirements:

(1) The Helicopter. During aerial work operations, over congested hostile area, the helicopter must be capable of sustaining a critical power unit failure with the remaining engine(s) at the appropriate power setting, without hazard to the persons on board or the suspended cargo, third parties, or property.

(2) The Crew: Notwithstanding the requirements prescribed in Subpart N, the following apply to the aerial work operations:

(i) Selection: The operations manual shall contain criteria for the selection of flight crew members for the aerial work task the operator has been approved for.

(ii) Experience. The minimum experience level for commanders conducting aerial work flights shall not be less than;

(a1) 500 hours as a pilot in command.

(iii) Recency: All pilots and crewmembers conducting aerial work, shall, when executing aerial work tasks for which in accordance with the ops manual extra training is required, in addition to the requirements of OPS3.970(a), have completed in the last 90 days the

required training program or have been flying in a similar aerial work task.

(iv) Crew composition: The minimum crew composition for the aerial work tasks the operator is approved for shall be stated in the ops manual.

(v) Additional requirements: The installation of all helicopter equipment including any subsequent modifications, for under sling load, outside load carriage or outside equipment fitting for the aerial work task the helicopter is contracted for shall have an airworthiness approval appropriate to the intended function. This equipment must be designed and tested to the appropriate standard;

(vi) Helicopter communication equipment: Radio equipment, in addition to that required by Subpart L, for required helicopter ground communication during the assigned task as described in the ops manual will require airworthiness approval. The requirement shall include two-way communication with the ground crew required.

(vii) Training and checking: In addition to the requirements of Subpart N, the proficiency check- and training program as required in the operations manual shall contain extra training- and checking subjects concerning the aerial work activities the operator has been approved for.

(viii) Aerial work passenger: The aerial work passenger or aerial work crew member shall be trained with the requirements of Subpart O in addition with the training requirements of the ops manual and the aerial work tasks the operator has obtained an approval.

(3) Flight Time Limitation: The operations manual shall contain a flight time limitation scheme and a procedure for registration for helicopter flight crew members applicable for the specialized tasks the operator has obtained an approval for. The flight time limitation scheme must be approved by CARC.

(d) Prohibition. The following activities are prohibited:

(1) OPS3.065. Carriage of weapons of war and munitions of war.

(2) OPS3.265. Carriage of inadmissible passengers, deportees or persons in custody.

(3) OPS3.305. Refueling/ defueling with passengers embarking, on board or disembarking.

(4) OPS3.335. Smoking on board.

(e) Alleviation. The following rules are alleviated:

(1) OPS3.100 Admission to cockpit:

(i) An operator must establish rules for the carriage of passengers in a pilot seat, if applicable.

(ii) The commander must ensure that:

(A) carriage of passengers in the pilot seat does not cause distraction and/or interference with the flight's operation; and

(B) the passenger occupying a pilot seat is made familiar with the relevant restrictions and safety procedures.

(2) OPS3.135 Additional information and forms to be carried.

(i) For local operations the following documents need not be carried:

(A) OPS3.135(a)(1) -Operational Flight Plan;

(B) OPS3.135(a)(2) -Technical Log (except where required for landings away from home station)

(C) OPS3.135(a)(4) -Notam/AIS documentation

(D) OPS3.135(a)(5) -Meteorological information

(E) OPS3.135(a)(7) -Notification of special passengers etc.

(F) OPS3.135(a)(8) -Notification of special loads, etc.

(ii) For non-local operations:

(A) OPS3.135(a)(1) -Operational Flight Plan. The flight plan may be in a simplified form, relevant to the kind of operations conducted and acceptable to CARC.

(B) OPS3.135(a)(7) -Notification of special passengers. Is not required.

(3) OPS3.140 Information retained on the ground. Information need not be retained on the ground when other methods of recording are employed.

(4) OPS3.165 Leasing. Applicable only where formal leasing agreement exists.

Note: The case where the contract to carry the passengers are transferred to another operator to whom the passengers will pay for the transport, is not considered as leasing.

(5) OPS3.215 Use of Air Traffic Services.

Not applicable unless mandated by air space requirements and providing search and rescue service arrangements are acceptable to CARC.

(6) OPS3.220 Authorization of Heliports by the operator. An operator shall establish a procedure to qualify the Commanders for the selection of heliports or landing sites, suitable for the type of helicopter and the type of operation.

(7) OPS3.255 Fuel policy.

Subparagraphs (b) to (d) are not applicable when the fuel policy prescribed in OPS3.255(a) ensures that, on completion of the flight, or series of flights, the fuel remaining is not less than an amount of fuel sufficient for 30 minutes flying time at normal cruising (this may be reduced to 20 minutes when operating within an area providing continuous and suitable precautionary landing sites).

Final reserve fuel must be specified in the operations manual in order to be able to comply with OPS3.375(c).

(8) OPS3.280 Passenger seating.

Procedures are not required to be established.

Note: The intent of this paragraph is achieved by the pilot using normal judgment.

OPS3.260 is applicable and is considered to address the need for procedures.

(9) OPS3.285 Passenger briefing.

Paragraph (a)(1). Unless to do so would be unsafe, passengers are verbally briefed about safety matters, parts or all of which may be given by an audio-visual presentation. Prior approval must be given for the use of portable electronic devices.

(10) OPS3.290 Flight preparation.

(i) For local operations:

(A) OPS3.290(a). An operational flight plan is not required.

(ii) For non-local operations:

(A) OPS3.290(a). An operational flight plan may be prepared in a simplified form relevant to the kind of operation.

(11) OPS3.375 In-flight fuel management.

Appendix 1 to OPS3.375 need not be applied (see (d)(14) below).

(12) OPS3.385 Use of supplemental oxygen.

With prior approval of CARC, excursions between 10 000 ft and 16 000 ft for a short duration may be undertaken without the use of supplemental oxygen in accordance with procedures contained in the Operations Manual. (In such circumstances, the operator must ensure that the passengers are informed before departure that supplemental oxygen will not be provided.)

(13) Appendix 1 to OPS3.270

Stowage of baggage and cargo. As appropriate to the type of operation and helicopter.

(14) Appendix 1 to OPS3.375 In flight fuel management.

Not applicable.

(15) OPS3.630 General Introduction. Instruments and Equipment.

Alternative equipment that does not meet current JTSO standards but does meet the safety standard of the original equipment may be acceptable to CARC (16) OPS3.775 Supplemental Oxygen.

Non pressurized helicopters. With prior approval of CARC, excursions of a short duration between 10 000 ft and 16 000 ft may be undertaken without supplemental oxygen, in accordance with procedures contained in the Operations Manual.

(17) Appendix 1 to OPS3.775

Supplemental oxygen for non-pressurized helicopters.

Not applicable in accordance with (12) & (16) above.

(18) OPS3.955(b) Upgrading to Commander.

CARC may accept an abbreviated command course relevant to the type of operation to be undertaken.

(19) OPS3.970(a) Recent Experience when flying more than one type of helicopter:

(1) As an alternative to the requirement of OPS3.970(a), with prior approval of CARC, the 90 day recency may be satisfied if a pilot has performed 3 takeoffs, 3 circuits and 3 landings on any helicopter in the same designated group in the preceding 90 days (see ACJ to Appendix 1 to OPS3.005(f) paragraph (d)(19)).

(2) When a pilot has not been flying a specialized task he should be trained for, during the last 6 months, he shall perform a training program as required in Ops 1.240, before to be scheduled for this task.

(3) The recency qualification for the helicopter type to be operated is conditional upon:

(i) the Type Rating Proficiency Check (TRPC) on the type being valid; and

(ii) the achievement of 2 flying hours on the type or variant within the last 6 months; and

(iii) an OPC being valid on one of the helicopters in the designated group; and

(iv) a strict rotation of OPCs for all helicopters being flown in the designated group; and

(v) the composition of designated groups and the procedure for validation of TRPCs, OPCs and recency, being contained in the operations manual.

(20) Appendix 1 to OPS3.965 Recurrent Training and checking when flying more than one type of helicopter. A syllabus applicable to the type of operation may be accepted by CARC.

(21) OPS3.1060 Operational flight plan. See (2)(i)(A) & (2)(ii)(A) above.

(22) OPS3.1235 Security requirements. Applicable only when operating in the State when the national security program to the operations covered in this Appendix.

(23) OPS3.1240 Training programs. Training programs shall be adapted to the kind of operations performed. A suitable self-study training program may be acceptable to CARC. When the specialized services the helicopter is contracted are not described in the Helicopter Flight manual the Ops Manual should contain training program for those specialized services. These training programs must be approved by CARC.

(24) OPS3.1250 Helicopter search procedure checklist. No checklist is required.

-End-