

# ELEVENTH SCHEDULE (REGULATIONS 61 - 69)

## AERIAL WORK OPERATIONS

### **SUBPART A: GENERAL**

- 11.001 Applicability
- 11.005 Definitions
- 11.010 Acronyms

### **SUBPART B: AGRICULTURAL AIRCRAFT OPERATIONS**

- 11.015 Applicability
- 11.020 Certificate Required
- 11.025 Application for Certificate
- 11.030 Amendment of Certificate
- 11.035 Certification Requirements
- 11.040 Duration of Certificate
- 11.045 General Operating Rules
- 11.050 Carrying of Certificate
- 11.055 Limitations on Aerial Work Aircraft Operator
- 11.060 Manner of Dispensing
- 11.065 Economic Poison Dispensing
- 11.070 Personnel
- 11.075 Operations in Controlled Airspace Designated for an Airport
- 11.080 Operation Over Congested Areas: General
- 11.085 Operation Over Congested Areas: Pilots and Aircraft
- 11.090 Availability of Certificate
- 11.095 Records: Commercial Agricultural Aircraft Operator
- 11.100 Change of Address
- 11.105 Termination of Operations

### **SUBPART C: HELICOPTER EXTERNAL LOADS**

- 11.110 Applicability
- 11.115 Certificate Required
- 11.120 Duration of Certificate
- 11.125 Application for Certificate Issuance or Renewal
- 11.130 Requirements for Issuance of an Aerial Work Operator Certificate
- 11.135 Rotorcraft
- 11.140 Personnel
- 11.145 Amendment of Certificate
- 11.150 Availability, Transfer and Surrender of Certificate
- 11.155 Operating Rules
- 11.165 Carriage of Persons
- 11.170 Crewmember Training, Currency, and Testing Requirements
- 11.175 Flight Characteristics Requirements
- 11.180 Structures and Design
- 11.185 Operating Limitations
- 11.190 Rotorcraft-Load Combination Flight Manual
- 11.195 Markings and Placards
- 11.200 Airworthiness Certification

### **SUBPART D: GLIDER TOWING**

- 11.205 Applicability
- 11.210 Certificate Required
- 11.215 Aircraft Requirements
- 11.220 Experience and Training Requirements

### **SUBPART E: BANNER TOWING**

- 11.225 Applicability

- 11.230 Certificate or Authorization Required
- 11.235 Aircraft Requirements
- 11.240 Experience and Training Requirements
- 11.245 Operating Rules

#### **SUBPART F: TV AND MOVIE OPERATIONS**

- 11.250 Applicability
- 11.255 Certificate or Authorization Required
- 11.260 Aircraft Requirement
- 11.265 Experience and Training Requirements
- 11.270 Waiver Requirements
- 11.275 Contents of a Motion Picture and Television Flight Operations Manual

#### **SUBPART G: SIGHT-SEEING FLIGHTS**

- 11.280 Applicability
- 11.285 Certificate or Authorization Required
- 11.290 Experience and Training Requirements
- 11.295 Operating Rules

#### **SUBPART H: TRAFFIC REPORTING**

- 11.315 Applicability
- 11.320 Certificate or Authorization Required

#### **APPENDICES**

Appendix 1 to 11.080: Operation Over Congested Areas: General

#### **SUBPART A: GENERAL**

##### **11.001 APPLICABILITY**

- (a) This Schedule contains the requirements for those operators and operations that are considered to be aerial work in Jamaica.
- (b) All persons who conduct aerial work in Jamaica must comply with the certification requirements of this Schedule.
- (c) All persons who conduct aerial work in Jamaica must comply with the applicable airworthiness and operational requirements of the Schedules, except where this Schedule grants relief from those requirements or specifies additional requirements.

##### **11.005 DEFINITIONS**

For the purpose of this Schedule, the following definitions shall apply –

- (1) **“Agricultural aircraft operation”**. The operation of an aircraft for the purpose of—
  - (i) dispensing any economic poison;
  - (ii) dispensing any other substance intended for plant nourishment, soil treatment, propagation of plant life or pest control; or
  - (iii) engaging in dispensing activities directly affecting agriculture, horticulture or forest preservation, but not including the dispensing of live insects.
- (2) **“Banner”**. An advertising medium supported by a temporary framework attached externally to the aircraft and towed behind the aircraft.
- (3) **“Economic poison”**. Any substance or mixture of substances intended for—
  - (i) preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds and other forms of plant or animal life or viruses, except viruses on or in living human beings or other animals, which the Government of Jamaica may declare to be a pest; and
  - (ii) use as a plant regulator, defoliant or desiccant.
- (4) **“Rotorcraft-load combinations”**. Configurations for external loads carried by rotorcraft —
  - (i) Class A – external load fixed to the rotorcraft, cannot be jettisoned, and does not extend below the landing gear, used to transport cargo.

- (ii) Class B – external load suspended from the rotorcraft, which can be jettisoned, and is transported free of land or water during rotorcraft operations.
- (iii) Class C – external load suspended from the rotorcraft, which can be jettisoned, but remains in contact with land or water during rotorcraft operation.
- (iv) Class D - external load suspended from the rotorcraft for the carriage of persons.

**11.010 ACRONYMS**

The following acronyms are used in this Schedule -

- (1) AGL – Above Ground Level;
- (2) IFR – Instrument Flight Rules;
- (3) PIC – Pilot-in-Command;
- (4) RFM – Rotorcraft Flight Manual.

**SUBPART B: AGRICULTURAL AIRCRAFT OPERATIONS**

**11.015 APPLICABILITY**

- (a) This Subpart prescribes rules governing —
  - (1) agricultural aircraft operations within Jamaica; and
  - (2) the issue of commercial and private Aerial Work Operator Certificates – Aerial Application for those operations.
- (b) In a public emergency, a person conducting agricultural aircraft operations under this Schedule may, to the extent necessary, deviate from the operating rules of this Schedule for relief and welfare activities approved by an agency of the National or a local government.
- (c) Each person who, under the authority of this Subsection, deviates from a rule of this Schedule shall, within 10 days after the deviation, send to the Authority a complete report of the aircraft operation involved, including a description of the operation and the reasons for it.

**11.020 CERTIFICATE REQUIRED**

- (a) Except as provided in paragraphs (c) and (d) of this Subsection, no person may conduct agricultural aircraft operations without, or in violation of, an Aerial Work Operator Certificate – Aerial Application issued under this Schedule.
- (b) An operator may, if it complies with this Subpart, conduct agricultural aircraft operations with a rotorcraft with external dispensing equipment in place without an Aerial Work Operator Certificate – Aerial Application.
- (c) A local or national government conducting agricultural aircraft operations with public aircraft need not comply with this Subpart.
- (d) The holder of a rotorcraft external-load operator certificate under this Schedule may conduct an agricultural aircraft operation, involving only the dispensing of water on forest fires by rotorcraft external-load means.

**11.025 APPLICATION FOR CERTIFICATE**

An applicant for an Aerial Work Operator Certificate shall apply on a form and in a manner prescribed by the Authority.

**11.030 AMENDMENT OF CERTIFICATE**

- (a) An Aerial Work Operator Certificate may be amended —
  - (1) on the Authority’s own initiative, under applicable laws and regulations; or
  - (2) upon application by the holder of that certificate.
- (b) A certificate holder shall submit any application to amend an Aerial Work Operator Certificate on a form and in a manner prescribed by the Authority. The applicant shall file the application at

least 15 days before the date that it proposes the amendment become effective, unless the Authority approves a shorter filing period.

- (c) The Authority will grant a request to amend a certificate if it determines that safety in air commerce and the public interest so allow.
- (d) Within 30 days after receiving a refusal to amend, the holder may petition the Authority to reconsider the refusal.

#### **11.035 CERTIFICATION REQUIREMENTS**

- (a) General. Except as provided by paragraph (a) (2) of this Subsection —
  - (1) the Authority will issue an Aerial Work Operator Certificate to an applicant who meets the requirements of this Subpart for that certificate.
  - (2) an applicant who applies for an Aerial Work Operator Certificate containing a prohibition against the dispensing of economic poisons is not required to demonstrate knowledge specific to economic poisons.
- (b) Pilots.
  - (1) A private operator-pilot applicant shall hold a current Jamaica Private, Commercial or Airline Transport Pilot Licence and be properly rated for the aircraft to be used.
  - (2) A commercial operator-pilot applicant shall hold, or have available the services of at least one pilot who holds a current Commercial or Airline Transport Pilot Licence issued by the Authority and who is properly rated for the aircraft to be used.
- (c) Aircraft. The applicant shall have at least one certified and airworthy aircraft, equipped for agricultural operation.
- (d) Knowledge and skill tests. The applicant shall show that he has satisfactory knowledge and skill of the following agricultural aircraft operations.
  - (1) Knowledge -
    - (i) steps to be taken before starting operations, including a survey of the area to be worked;
    - (ii) safe handling of economic poisons and the proper disposal of used containers for those poisons;
    - (iii) the general effects of economic poisons and agricultural chemicals on plants, animals and persons, and the precautions to be observed in using poisons and chemicals;
    - (iv) primary symptoms of poisoning of persons from economic poisons, the appropriate emergency measures to be taken and the location of poison control centres;
    - (v) performance capabilities and operating limitations of the aircraft to be used;
    - (vi) safe flight and application procedures;
  - (2) skill in the following manoeuvres, demonstrated at the aircraft's maximum certified take-off mass or the maximum mass established for the special purpose load, whichever is greater —
    - (i) short-field and soft-field takeoffs (aeroplanes and gyroplanes only);
    - (ii) approaches to the working area;
    - (iii) flare-outs;
    - (iv) swath runs;
    - (v) pull-ups and turnarounds; and
    - (vi) rapid deceleration (quick stops) in helicopters only.

#### **11.040 DURATION OF CERTIFICATE**

An Aerial Work Operator Certificate is effective for a period of one year or until it is surrendered, suspended or revoked.

**11.045 GENERAL OPERATING RULES**

- (a) Except as provided in paragraph (c) of this Subsection, this Subsection prescribes rules that apply to persons and aircraft used in agricultural aircraft operations conducted under this Schedule.
- (b) The holder of an Aerial Work Operator Certificate may deviate from the provisions of Schedule 10 without a certificate of waiver when conducting aerial work operations related to agriculture, horticulture or forest preservation in accordance with the operating rules of this Subsection.
- (c) The operating rules of this Subpart apply to Rotorcraft External load certificate holders conducting agricultural aircraft operations involving only the dispensing of water on forest fires by rotorcraft external-load means.

**11.050 CARRYING OF CERTIFICATE**

- (a) No person may operate an aircraft unless a facsimile of the Aerial Work Operator Certificate is carried on that aircraft.
- (b) The registration and airworthiness certificates issued for the aircraft need not be carried in the aircraft provided that those certificates not carried in the aircraft shall be kept available for inspection at the base from which the dispensing operation is conducted.

**11.055 LIMITATIONS ON AERIAL WORK AIRCRAFT OPERATOR**

No person may conduct an aerial work operation under the authority of an Aerial Work Operator Certificate – Aerial Application —

- (1) over a congested area;
- (2) over any property unless he or she is the owner or lessee of the property or has ownership or other property interest in the crop located on that property; or
- (3) over any property unless he or she has the owner's approval to do so.

**11.060 MANNER OF DISPENSING**

No person may dispense, or cause to be dispensed, any material or substance in a manner that creates a hazard to persons or property on the surface.

**11.065 ECONOMIC POISON DISPENSING**

No person may dispense or cause to be dispensed, any economic poison that is registered with Jamaica —

- (1) for a use other than that for which it is registered;
- (2) contrary to any safety instructions or use limitations on its label; or
- (3) in violation of any law or regulation of Jamaica.

**11.070 PERSONNEL**

- (a) Information. The holder of an Aerial Work Operator Certificate shall insure that each person used in the holder's agricultural aircraft operation is informed of that person's duties and responsibilities.
- (b) Supervisors. No person may supervise an agricultural aircraft operation unless he or she has met the knowledge and skill requirements of this Subpart.
- (c) Pilot-in-command. No person may act as PIC of an aircraft operated under this Subpart unless that pilot—
  - (1) holds a pilot licence and rating prescribed by this Subpart as appropriate to the type of operation conducted; and
  - (2) has demonstrated to the holder of the Aerial Work Operator Certificate conducting the operation or to a supervisor designated by that certificate holder, that he or she possesses the knowledge and skill requirements of this Subpart.

**11.075 OPERATIONS IN CONTROLLED AIRSPACE DESIGNATED FOR AN AIRPORT**

- (a) Except for flights to and from a dispensing area, no person may operate an aircraft within the lateral boundaries of the surface area of Class D airspace designated for an airport unless authorization for that operation has been obtained from the ATC facility having jurisdiction over that area.
- (b) No person may operate an aircraft in weather conditions below VFR minimums within the lateral boundaries of a Class E airspace area that extends upward from the surface unless authorization for that operation has been obtained from the ATC facility having jurisdiction over that area.

**11.080 OPERATION OVER CONGESTED AREAS: GENERAL**

- (a) A certificate holder may operate or cause the operation of an aircraft over a congested area at altitudes required if the operation is conducted with —
  - (1) the maximum safety to persons and property on the surface, consistent with the operation; and
  - (2) a plan for each operation, submitted and have approved by the Authority, which includes —
    - (i) obstructions to flight;
    - (ii) emergency landing capabilities of the aircraft to be used; and
    - (iii) any necessary co-ordination with air traffic control.
- (b) Each certificate holder shall ensure that all aircraft operations are conducted as prescribed by the Authority.

*(See Appendix 1 to 11.080 for specific restrictions when operating over congested areas.)*

**11.085 OPERATION OVER CONGESTED AREAS: PILOTS AND AIRCRAFT**

- (a) Pilots. Every PIC must have at least —
  - (1) 25 hours of PIC flight time in the make and basic model of the aircraft, including at least 10 hours within the preceding 12 calendar months; and
  - (2) 100 hours of flight experience as PIC in dispensing agricultural materials or chemicals.
- (b) Aircraft. Every aircraft, except helicopters, shall be capable of jettisoning at least one-half of the aircraft's maximum authorized load of agricultural material within 45 seconds. Where the aircraft is equipped to release the tank or hopper as a unit, there shall be a means to prevent inadvertent release by the pilot or other crewmember.

**11.090 AVAILABILITY OF CERTIFICATE**

Each holder of an Aerial Work Operator Certificate shall keep that certificate at its home base and shall present it for inspection on the request of the Authority or any government law enforcement officer.

**11.095 RECORDS: COMMERCIAL AGRICULTURAL AIRCRAFT OPERATOR**

- (a) Every holder of an Aerial Work Operator Certificate shall maintain and keep current, at the home base designated in its application, the following records —
  - (1) the name and address of each person for whom agricultural aircraft services were provided;
  - (2) the date of the service;
  - (3) the name and quantity of the material dispensed for each operation conducted; and
  - (4) the name, address and licence number of each pilot used in agricultural aircraft operations and the date that pilot met the knowledge and skill requirements of this Subpart.
- (b) The records required by this Subsection shall be kept for at least 12 months.

**11.100 CHANGE OF ADDRESS**

Every holder of an Aerial Work Operator Certificate shall notify the Authority in writing in advance of any change in the address of its home base of operations.

#### **11.105 TERMINATION OF OPERATIONS**

Whenever a certificate holder ceases operations under this Schedule, that person shall surrender that certificate to the designated office of the Authority.

### **SUBPART C: HELICOPTER EXTERNAL LOADS**

#### **11.110 APPLICABILITY**

- (a) This Subpart prescribes —
  - (1) airworthiness certification rules for rotorcraft used in external-load operations; and
  - (2) operating and certification rules governing the conduct of rotorcraft external-load operations in Jamaica.
- (b) The certification rules of this Schedule do not apply to —
  - (1) rotorcraft manufacturers when developing external-load attaching means;
  - (2) operations conducted by a person demonstrating compliance for the issuance of a certificate or authorization under this Schedule;
  - (3) training flights conducted in preparation for the demonstration of compliance with this Schedule; or
  - (4) a local or national government conducting operations with public aircraft.
- (c) For the purpose of this Schedule, a person other than a crewmember or a person who is essential and directly connected with the external-load operation may be carried only in approved Class D rotorcraft-load combinations.
- (d) For the purpose of this Subpart, the term aerial work operator certificate means Aerial Work Operator Certificate – Rotorcraft External-Load.

#### **11.115 CERTIFICATE REQUIRED**

No person subject to this Schedule may conduct rotorcraft external-load operations without, or in violation of the terms of, an Aerial Work Operator Certificate – Rotorcraft External-Load or equivalent authorization issued by the Authority.

#### **11.120 DURATION OF CERTIFICATE**

Unless sooner surrendered, suspended or revoked, an Aerial Work Operator Certificate expires at the end of the twelfth month after the month in which it is issued or renewed.

#### **11.125 APPLICATION FOR CERTIFICATE ISSUANCE OR RENEWAL**

Application for an original certificate or renewal of a certificate issued under this Schedule is made on a form, and in a manner, prescribed by the Authority.

#### **11.130 REQUIREMENTS FOR ISSUANCE OF AN AERIAL WORK OPERATOR CERTIFICATE**

- (a) Where an applicant shows that he complies with this Subpart, the Authority will issue an Aerial Work Operator Certificate to him.
- (b) The Authority will issue authorization to operate specified rotorcraft with those classes of rotorcraft-load combinations for which the applicant or certificate holder qualifies under the applicable provisions of this Subpart.

#### **11.135 ROTORCRAFT**

An applicant must have the exclusive use of at least one rotorcraft that —

- (1) was type certified under, and meets the requirements of, the several parts of these regulations which prescribe requirements for rotorcraft external-load operations;
- (2) complies with the certification provisions in this Subpart that apply to the rotorcraft-load combinations for which authorization is requested; and
- (3) has a valid standard or restricted category Certificate of Airworthiness.

**11.140 PERSONNEL**

- (a) An applicant shall hold, or have available the services of at least one person who holds a current Commercial or Airline Transport Pilot Licence issued by the Authority with a rating appropriate for the rotorcraft to be used.
- (b) An applicant shall designate one pilot, who may be the applicant, as Chief Pilot for rotorcraft external-load operations.
- (c) An applicant may designate qualified pilots as Assistant Chief Pilots to perform the functions of the chief pilot when the chief pilot is not readily available.
- (d) The chief pilot and Assistant Chief Pilots must be acceptable to the Authority and each must hold a current Commercial or Airline Transport Pilot Licence, with a rating appropriate for the rotorcraft to be used.
- (e) The holder of an Aerial Work Operator Certificate shall report any change in designation of Chief Pilot or Assistant Chief Pilot immediately to the Authority.
- (f) A newly designated Chief Pilot shall comply with the knowledge and skill requirements of this Subpart within 30 days or the operator may not conduct further operations under the Aerial Work Operator Certificate, unless otherwise authorized by the Authority.

**11.145 AMENDMENT OF CERTIFICATE**

- (a) The holder of an Aerial Work Operator Certificate may apply to the Authority for an amendment of its certificate, to add or delete a rotorcraft-load combination authorization.
- (b) The holder of an Aerial Work Operator Certificate may apply for an amendment to add or delete a rotorcraft authorization by submitting to the Authority a new list of rotorcraft, by registration number, with the classes of rotorcraft-load combinations for which authorization is requested.

**11.150 AVAILABILITY, TRANSFER AND SURRENDER OF CERTIFICATE**

- (a) Each person conducting a rotorcraft external-load operation shall carry a facsimile of the Aerial Work Operator Certificate in each rotorcraft used in the operation.
- (b) A certificate holder shall return its certificate to the Authority —
  - (1) if the Authority suspends or revokes its aerial work operator certificate; or
  - (2) if the certificate holder discontinues operations and does not resume operations within one year.

**11.155 OPERATING RULES**

- (a) No person may conduct a rotorcraft external load operation without, or contrary to, the Rotorcraft/Load Combination Flight Manual prescribed in this Schedule.
- (b) No person may conduct a rotorcraft external load operation unless -
  - (1) the rotorcraft complies with this Schedule; and
  - (2) the rotorcraft and rotorcraft/load combination is authorized under the Aerial Work Operator Certificate.
- (c) Before a person may operate a rotorcraft with an external load configuration that differs substantially from any that person has previously carried with that type of rotorcraft (whether or not the rotorcraft/load combination is of the same class), that person shall conduct, in a manner that will not endanger persons or property on the surface, such of the following flight operational checks as the Authority determines are appropriate to the rotorcraft/load combination –
  - (1) a determination that the mass of the rotorcraft/load combination and the location of its centre of gravity are within approved limits, that the external load is securely fastened and that the external load does not interfere with devices provided for its emergency release.
  - (2) make an initial liftoff and verify that controllability is satisfactory.
  - (3) while hovering, verify that directional control is adequate.

- (4) accelerate into forward flight to verify that no attitude (whether of the rotorcraft or of the external load) is encountered in which the rotorcraft is uncontrollable or which is otherwise hazardous.
  - (5) in forward flight, check for hazardous oscillations of the external load, but if the external load is not visible to the pilot, other crewmembers or ground personnel may make this check and signal the pilot.
  - (6) increase the forward airspeed and determine an operational airspeed at which no hazardous oscillation or hazardous aerodynamic turbulence is encountered.
- (d) Notwithstanding the provisions of the Tenth Schedule, the holder of an Aerial Work Operator Certificate may conduct rotorcraft external load operations over congested areas if those operations are conducted without hazard to persons or property on the surface and comply with the following:
- (1) the operator shall develop a plan for each complete operation and obtain approval for the operation from the Authority.
- (Note: The plan must include an agreement with the appropriate political subdivision that local officials will exclude unauthorized persons from the area in which the operation will be conducted, coordination with air traffic control, if necessary, and a detailed chart depicting the flight routes and altitudes.)*
- (2) each flight shall be conducted at an altitude, and on a route, that will allow a jettisonable external load to be released, and the rotorcraft landed, in an emergency without hazard to persons or property on the surface.
- (e) Notwithstanding the provisions of the Tenth Schedule, and except as provided in this Schedule, the holder of a Aerial Work Operator Certificate may conduct external load operations, including approaches, departures and load positioning manoeuvres necessary for the operation, below 500 feet above the surface and closer than 500 feet to persons, vessels, vehicles and structures, if the operations are conducted without creating a hazard to persons or property on the surface.
- (f) No person may conduct rotorcraft external-load operations under IFR unless specifically approved by the Authority.

**11.165 CARRIAGE OF PERSONS**

- (a) No certificate holder may allow a person to be carried during rotorcraft external load operations unless that person —
  - (1) is a flight crewmember;
  - (2) is a flight crewmember trainee;
  - (3) performs an essential function in connection with the external load operation; or
  - (4) is necessary to accomplish the work activity directly associated with that operation.
- (b) The PIC shall ensure that all persons are briefed before takeoff on all pertinent procedures to be followed (including normal, abnormal and emergency procedures) and equipment to be used during the external load operation.

**11.170 CREWMEMBER TRAINING, CURRENCY, AND TESTING REQUIREMENTS**

- (a) No certificate holder may use, nor may any person serve, as a pilot in helicopter external-load operations unless that person —
  - (1) has successfully demonstrated to the Authority the knowledge and skill with respect to the rotorcraft/load combination; and
  - (2) has in his or her personal possession a letter of competency or an appropriate logbook entry indicating compliance with paragraph (a)(1) of this Subsection.
- (b) No AOC holder may use, nor may any person serve as, a crewmember or other operations personnel in Class D operations unless, within the preceding 12 calendar months, that person has successfully completed either an approved initial or a recurrent training programme.

- (c) Notwithstanding the provisions of paragraph (b) of this Subsection, a person who has performed a rotorcraft external load operation of the same class and in an aircraft of the same type within the past 12 calendar months need not undergo recurrent training.

#### **11.175 FLIGHT CHARACTERISTICS REQUIREMENTS**

- (a) The applicant must demonstrate to the Authority, by performing the following operational flight checks, that the rotorcraft-load combination has satisfactory flight characteristics, unless these operational flight checks have been demonstrated previously and the rotorcraft-load combination flight characteristics were satisfactory. For the purposes of this demonstration, the external-load mass (including the external-load attaching means) is the maximum mass for which authorization is requested.
- (b) Class A rotorcraft-load combinations: The operational flight check must consist of at least the following manoeuvres –
- (1) take off and landing;
  - (2) demonstration of adequate directional control while hovering;
  - (3) acceleration from a hover; and
  - (4) horizontal flight at airspeeds up to the maximum airspeed for which authorization is requested.
- (c) Class B and D rotorcraft-load combinations: The operational flight check must consist of at least the following manoeuvres –
- (1) pickup of the external load;
  - (2) demonstration of adequate directional control while hovering;
  - (3) acceleration from a hover;
  - (4) horizontal flight at airspeeds up to the maximum airspeed for which authorization is requested;
  - (5) demonstrating appropriate lifting device operation; and
  - (6) manoeuvring of the external load into release position and its release, under probable flight operation conditions, by means of each of the quick-release controls installed on the rotorcraft.
- (d) Class C rotorcraft-load combinations: For Class C rotorcraft-load combinations used in wire-stringing, cable-laying or similar operations, the operational flight check must consist of the manoeuvres, as applicable, prescribed in paragraph (c) of this Subsection.

#### **11.180 STRUCTURES AND DESIGN**

- (a) External-load attaching means. Each external-load attaching means shall be approved by the Authority.
- (b) Quick release devices. Each quick release device means shall be approved by the Authority.
- (c) Mass and centre of gravity –
- (1) Mass. The total mass of the rotorcraft-load combination must not exceed the total mass approved for the rotorcraft during its type certification.
  - (2) Centre of gravity. The location of the centre of gravity must, for all loading conditions, be within the range established for the rotorcraft during its type certification. For Class C rotorcraft-load combinations, the magnitude and direction of the loading force must be established at those values for which the effective location of the centre of gravity remains within its established range.

#### **11.185 OPERATING LIMITATIONS**

In addition to the operating limitations set forth in the approved RFM, and to any other limitations the Authority may prescribe, the operator shall establish at least the following limitations and set them forth in the Rotorcraft-Load Combination Flight Manual for rotorcraft-load combination operations–

- (1) the rotorcraft-load combination may be operated only within the mass and centre of gravity limitations established in accordance with this Subpart;
- (2) the rotorcraft-load combination may not be operated with an external load mass exceeding that used in showing compliance with this Subpart;
- (3) the rotorcraft-load combination may not be operated at airspeeds greater than those established in accordance with this Subpart;
- (4) no person may conduct an external-load operation under this Schedule with a rotorcraft type certified in the restricted category over a densely populated area, in a congested airway or near a busy airport where passenger transport operations are conducted; and
- (5) the rotorcraft-load combination of Class D may be conducted only in accordance with the following—
  - (i) the rotorcraft to be used must have been type certified under transport Category A for the operating mass and provide hover capability with one engine inoperative at that operating mass and altitude;
  - (ii) the rotorcraft must be equipped to allow direct radio intercommunication among required crewmembers;
  - (iii) the personnel lifting device must be approved by the Authority; and
  - (iv) the lifting device must have an emergency release requiring two distinct actions.

#### **11.190 ROTORCRAFT-LOAD COMBINATION FLIGHT MANUAL**

The applicant must prepare a Rotorcraft-Load Combination Flight Manual and submit it for approval by the Authority. The limiting height-speed envelope data need not be listed as operating limitations. The manual shall set forth —

- (1) operating limitations, procedures (normal and emergency), performance and other information established under this Subpart;
- (2) the class of rotorcraft-load combinations for which the airworthiness of the rotorcraft has been demonstrated in accordance with this Subpart; and
- (3) in the information section of the Rotorcraft-Load Combination Flight Manual—
  - (i) information on any peculiarities discovered when operating particular rotorcraft-load combinations;
  - (ii) precautionary advice regarding static electricity discharges for Class B, Class C and Class D rotorcraft-load combinations; and
  - (iii) any other information essential for safe operation with external loads.

#### **11.195 MARKINGS AND PLACARDS**

The following markings and placards must be displayed conspicuously and must be such that they cannot be easily erased, disfigured or obscured —

- (1) a placard (displayed in the cockpit or cabin) stating the class of rotorcraft-load combination and the occupancy limitation for which the rotorcraft has been approved; and
- (2) a placard, marking, or instruction (displayed next to the external-load attaching means) stating the maximum external load approved.

#### **11.200 AIRWORTHINESS CERTIFICATION**

An Aerial Work Operator Certificate is a current and valid airworthiness certificate for each rotorcraft type and listed by registration number on a list attached to the certificate, when the rotorcraft is being used in operations conducted under this Schedule.

### **SUBPART D: GLIDER TOWING**

#### **11.205 APPLICABILITY**

This Subpart applies to those operations involving towing gliders by aircraft.

**11.210 CERTIFICATE REQUIRED**

No person may act as a tow pilot for a glider unless that person has at least a Private Pilot Licence with a category rating for the tow aircraft.

**11.215 AIRCRAFT REQUIREMENTS**

No person may operate an aircraft that is towing a glider unless the aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness.

**11.220 EXPERIENCE AND TRAINING REQUIREMENTS**

No person may act as a tow pilot for a glider unless that person has —

- (1) logged at least 100 hours of PIC time in same aircraft category, class and type, if applicable, as the tow aircraft;
- (2) received training in and instructor endorsement for —
  - (i) the techniques and procedures essential to the safe towing of gliders, including airspeed limitations;
  - (ii) emergency procedures;
  - (iii) signals used; and
  - (iv) maximum angles of bank.
- (3) has completed and had endorsed at least three flights as the sole manipulator of the controls of an aircraft towing a glider or simulating glider-towing flight procedures while accompanied by a pilot who meets the requirements of this Subsection; and
- (4) within the preceding 12 months has —
  - (i) made at least three actual glider tows; or
  - (ii) made at least three flights as pilot-in-command of a glider towed by an aircraft.

**SUBPART E: BANNER TOWING****11.225 APPLICABILITY**

This Subpart applies to those operations involving towing by aircraft banners or other signs, lit or unlit.

**11.230 CERTIFICATE OR AUTHORIZATION REQUIRED**

- (a) Except as provided in paragraph (c) of this Subsection, the Authority will require each person conducting operations covered by this Subpart to hold an Aerial Work Operator Certificate – Banner Towing or equivalent authorization.
- (b) The Authority will issue a certificate or authorization to each applicant who qualifies for it under the provisions of this Subpart.

**11.235 AIRCRAFT REQUIREMENTS**

- (a) No person may operate an aircraft that is towing a banner unless the aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness.
- (b) No person may operate a helicopter that is towing a banner unless the helicopter has a means to prevent the banner from becoming entangled in the helicopter's tail rotor during all phases of flight, including autorotations.

*(Note: The only way to prevent the banner from tangling in the tail rotor during autorotation may be to jettison the banner.)*

**11.240 EXPERIENCE AND TRAINING REQUIREMENTS**

- (a) For non-revenue flights, the pilot of the tow aircraft shall hold at least a valid Private Pilot Licence and have a minimum of 200 hours PIC time.

- (b) When banner tow operations are conducted for compensation or hire, the pilot shall have at least a Commercial Pilot Licence (instrument rating not required) and at least a valid first class medical certificate.
- (c) All pilots engaged in banner towing operations shall demonstrate competence to the Authority by performing at least one pickup and drop of the maximum number of letters (panels) to be used by the certificate holder.

*(Note: This demonstration should be observed from the ground to allow the Inspector to evaluate the competence of any essential ground personnel as well as the flight operation.)*

#### **11.245 OPERATING RULES**

- (a) All banner tow operations shall be conducted only —
  - (1) in VFR weather conditions; and
  - (2) between the hours of official sunrise and official sunset.
- (b) No person may conduct banner towing operations —
  - (1) over congested areas or open air assemblies of persons lower than 1,000 feet; and
  - (2) elsewhere lower than the minimum safe altitude requirements of the Tenth Schedule.
- (c) The certificate holder shall obtain the airport manager's approval to conduct banner tow operations.
- (d) If banner towing operations take place at an airport with a control tower, the certificate holder shall inform that control tower of the time of the banner tow operation.
- (e) The certificate holder shall notify the appropriate airport officials in advance when banner tow operations will be in close proximity to an uncontrolled airport.
- (f) Only essential crewmembers shall be carried when conducting banner tow operations.
- (g) When banner tow operations are conducted around congested areas, the pilot shall exercise due care so that, in the event of emergency release of the banner and/or towrope, it will not cause undue hazard to persons or property on the surface.
- (h) Each pilot shall drop the towrope in a pre-designated area at least 500 feet from persons, buildings, parked automobiles and aircraft.

*(Note: If the tow plane lands with the rope attached, due care will be exercised to avoid trailing the rope and endangering other aircraft in the air or persons, property or aircraft on the surface.)*

- (i) Each pilot conducting banner towing operations shall carry onboard the aircraft a current copy of the Aerial Work Operator Certificate – Banner Towing or authorization allowing banner towing operations.

### **SUBPART F: TV AND MOVIE OPERATIONS**

#### **11.250 APPLICABILITY**

- (a) This Subpart applies to those operations involving movie filming, appearance in flight in movies and airborne direction or production of such filming when those operations are conducted as part of a business enterprise or for compensation or hire.
- (b) For purposes of this Subpart, "movie" shall include film, videos and live broadcast in any format and the preparation and rehearsal for those operations.

#### **11.255 CERTIFICATE OR AUTHORIZATION REQUIRED**

- (a) The Authority shall require each person conducting operations covered by this Subpart to hold a certificate or equivalent authorization.

- (b) The Authority will issue a certificate or authorization to each applicant who qualifies for it under the provisions of this Subpart.

#### **11.260 AIRCRAFT REQUIREMENT**

In order to be used in motion picture and television filming operations, aircraft in the experimental category shall have an airworthiness certificate issued for the purpose of exhibition.

#### **11.265 EXPERIENCE AND TRAINING REQUIREMENTS**

No pilot may conduct television and movie operations unless he has –

- (1) a Commercial Pilot Licence with ratings appropriate to the category and class aircraft to be used under the terms of the waiver;
- (2) at least 500 hours as PIC;
- (3) a minimum of 100 hours in the category and class of aircraft to be used;
- (4) a minimum of five hours in the make and model aircraft to be used under the waiver; and
- (5) if the pilot intends to perform aerobatics below 1,500 AGL, a Statement of Aerobatics Competency for the operations to be performed.

#### **11.270 WAIVER REQUIREMENTS**

- (a) A waiver shall be obtained if filming sequences require an aircraft to be flown —

- (1) in aerobatic flight below 1,500 AGL;
- (2) over a congested area; or
- (3) in controlled airspace.

*(Note: When conducting any filming operation requiring a waiver, the certificate holder shall ensure that all reasonable efforts are made to confine spectators to designated areas. If reasonable efforts have been taken and unauthorized persons or vehicles enter the airspace where manoeuvres are being performed during the filming production event, efforts must be made to remove them.)*

- (b) The holder of the waiver shall provide a schedule of events that lists the —
- (1) identification of the aircraft; and
  - (2) performers in the sequence of their appearance.
- (c) Any manoeuvres added or time changes to the schedule of events shall be approved by the Authority.
- (d) The waiver holder shall develop, have approved by the Authority, and adhere to a Motion Picture and Television Flight Operations Manual.

#### **11.275 CONTENTS OF A MOTION PICTURE AND TELEVISION FLIGHT OPERATIONS MANUAL**

Every Motion Picture and Television Flight Operations Manual shall contain at least the following –

- (1) Company Organization -
  - (i) business name, address and telephone number of applicant.
  - (ii) list of pilots to be used during the filming, including their pilot licence type and numbers and class and date of medical.
  - (iii) list of aircraft by make and model.
- (2) Distribution and Revision. Procedures for revising the manual to ensure that all manuals are kept current.
- (3) Persons Authorized. Procedures to ensure that no persons, except those persons consenting to be involved and necessary for the filming production, are allowed within 500 feet of the filming production area.
- (4) Area of Operations. The area that will be used during the term of the waiver.
- (5) Plan of Activities. Procedures for the submission, within three days of scheduled filming, a written plan of activities to the Authority containing at least the following –

- (i) dates and times for all flights;
  - (ii) name and phone number of person responsible for the filming production event;
  - (iii) make and model of aircraft to be used and type of airworthiness certificate, including category;
  - (iv) name of pilots involved in the filming production event;
  - (v) a statement that permission has been obtained from property owners and/or local officials to conduct the filming production event;
  - (vi) signature of waiver holder or a designated representative; and
  - (vii) a general outline or summary of the production schedule, to include maps or diagrams of the specific filming location, if necessary.
- (6) Permission to Operate. Requirements and procedures that the waiver holder will use to obtain permission from property owners and/or local officials (e.g., police, fire departments, etc.), as appropriate, for the conduct of all filming operations when using the waiver.
- (7) Security. Method of security that will be used to exclude all persons not directly involved with the operation from the location.

*(Note: This should also include the provision that will be used to stop activities when unauthorized persons, vehicles or aircraft enter the operations area, or for any other reason, in the interest of safety.)*

- (8) Briefing of Pilot/Production Personnel. Procedures to brief personnel of the risks involved, emergency procedures and safeguards to be followed during the filming production event.
- (9) Certification/Airworthiness. Procedures to ensure that required inspections will be conducted.
- (10) Communications. Procedures to provide communications capability with all participants during the actual operation and filming.

*(Note: The applicant can use oral, visual or radio communications as long as it keeps the participants continuously apprised of the current status of the operation.)*

- (11) Accident Notification. Procedures for notification and reporting of accidents.

## **SUBPART G: SIGHT-SEEING FLIGHTS**

### **11.280 APPLICABILITY**

- (a) This Subpart applies to those operations involving the carriage of persons for viewing natural formations or manmade objects on the ground when those operations are conducted as part of a business enterprise or for compensation or hire, and
- (b) The flight is unquestionably advertised as “sight-seeing,” and
- (c) The flight returns to the airport of departure without having landed at any other airport, and
- (d) The certificated passenger capacity of the aircraft does not exceed 9 passengers.

*(Note: Any other passenger carrying flight for remuneration, hire or valuable consideration must be conducted under an Air Operator Certificate (AOC).)*

### **11.285 CERTIFICATE OR AUTHORIZATION REQUIRED**

- (a) The Authority will require each person conducting operations covered by this Subpart to hold a certificate or equivalent authorization.
- (b) The Authority will issue a certificate or authorization to each applicant who qualifies for it under the provisions of this Subpart.
- (c) Each operator under this Subpart shall hold an operating certificate issued under the provisions of this Schedule.

**11.290 EXPERIENCE AND TRAINING REQUIREMENTS**

The requirements of the Tenth Schedule apply to all operations described by this Subpart.

**11.295 OPERATING RULES**

The requirements of the Tenth Schedule apply to all operations described by this Subpart.

**SUBPART H: TRAFFIC REPORTING****11.315 APPLICABILITY**

This Subpart applies to those operations involving the observation of, and reporting on, vehicular traffic conditions on the highways and streets when conducted by aircraft or airmen, or both, not designated as solely public use.

**11.320 CERTIFICATE OR AUTHORIZATION REQUIRED**

- (a) The Authority will require each person conducting operations covered by this Subpart to hold a certificate or equivalent authorization.
- (b) The Authority will issue a certificate or authorization to each applicant who qualifies for it under the provisions of this Subpart.

**APPENDICES****APPENDIX 1 TO 11.080: OPERATION OVER CONGESTED AREAS: GENERAL**

- (a) Except for helicopters, during take offs and turnarounds, with no load, each certificate holder shall ensure that all single-engine aircraft, while in a congested area, operate –
  - (1) not below the altitudes prescribed in the Tenth Schedule except during the actual dispensing operation, including the approaches and departures necessary for that operation.
  - (2) during the actual dispensing operation, including the approaches and departures for that operation, not below the altitudes prescribed in the Tenth Schedule unless it is in an area and at such an altitude that the aircraft can make an emergency landing without endangering persons or property on the surface.
- (b) Each certificate holder shall ensure that all multiengine aircraft while in a congested area operate–
  - (1) during take off, under conditions that will allow the aeroplane to be brought to a safe stop within the effective length of the runway from any point on takeoff up to the time of attaining, with all engines operating at normal takeoff power, 105 percent of the minimum control speed with the critical engine inoperative in the takeoff configuration or 115 percent of the power-off stall speed in the takeoff configuration, whichever is greater.

*(Note: Assume still-air conditions and no correction for any uphill gradient of 1 percent or less when the percentage is measured as the difference between elevations at the end points of the runway divided by the total length. For uphill gradients greater than 1 percent, the effective takeoff length of the runway is reduced 20 percent for each 1-percent grade.)*

- (2) at a mass greater than the mass that, with the critical engine inoperative, would permit a rate of climb of at least 50 feet per minute at an altitude of at least 300 m (1,000 feet) above the elevation of the highest ground or obstruction within the area to be worked or at an altitude of 1,500 m (5,000 feet), whichever is higher. Assume that the propeller of the inoperative engine is in the minimum drag position; that the wing flaps and landing gear are in the most favourable positions; and that the remaining engine or engines are operating at the maximum continuous power available.
- (3) not below the altitudes prescribed in the Tenth Schedule except during the actual dispensing operation, including the approaches, departures and turnarounds necessary for that operation.