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/ Exemption from Sections 602.41 and 603.66 of the Canadian Aviation Regulations

## EXEMPTION FROM SECTIONS 602.41 AND 603.66 OF THE *CANADIAN AVIATION REGULATIONS*

Pursuant to Subsection 5.9(2) of the *Aeronautics Act*, and after having determined that the exemption is in the public interest and is not likely to adversely affect aviation safety, I hereby exempt persons conducting flight operations utilizing unmanned air vehicles (UAVs), with a maximum take-off weight not exceeding 2 kilograms, operated within visual line-of-sight, from the requirements of sections 602.41 and 603.66 of the *Canadian Aviation Regulations* (CARs), subject to the conditions set out below.

Excerpts from the CARs are included in **Appendix A** to this exemption.

### INTERPRETATION

For the purpose of this exemption:

**Autonomous** - means the ability to execute processes or missions using onboard decision-making capabilities. An autonomous UAV system is not designed to permit crew member intervention.

**Command and Control (C2) Link** – means the data link between the UAV and the control station for the purposes of managing the flight.

**Control Station** – means the facilities and/or equipment remote from the UAV from which the aircraft is controlled and/or monitored.

**First Person View (FPV) Device** – means a device that generates and transmits a streaming video image to a control station display or monitor giving the pilot who is viewing this video, the illusion of actually flying the UAV from an onboard pilot's perspective.

**Lost Link** - means the loss of command and control link contact with the UAV such that the pilot can no longer manage the aircraft's flight.

**UAV Operator** - means the person that has possession of the UAV system, as owner, lessee or otherwise.

**UAV System** – means a set of configurable elements consisting of an UAV, its associated control station(s), the required command and control links and any other elements as may be required, at any point during flight operation

**Visual line-of-sight (VLOS)** - means unaided (corrective lenses and/or sunglasses exempted) visual contact with the UAV sufficient to be able to maintain operational control of the aircraft, know its location, and be able to scan the airspace in which it is operating to decisively see and avoid other air traffic or objects.

**Visual Observer** - means a trained crew member, in visual line-of-sight of the UAV, who assists the pilot in the duties associated with collision avoidance and complying with the applicable rules of flight.

## PURPOSE

This exemption relieves persons conducting non-recreational UAV system operations utilizing a UAV with a maximum take-off weight not exceeding 2 kilograms, operated within visual line-of-sight from the requirement to obtain a Special Flight Operations Certificate (SFOC) as required by sections 602.41 and the requirement to comply with the conditions of an SFOC as required by section 603.66 of the *CARs*.

The exemption will permit non-recreational UAVs with a maximum take-off weight not exceeding 2 kilograms to be operated away from built-up areas, controlled airspace, aerodromes, forest fire areas and other restricted locations. The exemption includes conditions which address the need for the safe and responsible use of certain UAV systems.

UAV operations conducted outside the terms and conditions of this exemption will be subject to the requirements for an SFOC.

## APPLICATION

This exemption applies to any person conducting UAV system operations within Canadian Domestic Airspace utilizing UAVs with a maximum take-off weight not exceeding 2 kilograms within visual line-of-sight.

This exemption does **not** apply to:

- a. Operations of model aircraft;
- b. Operations of an Autonomous UAV; or
- c. Operations by a foreign UAV operator.

## CONDITIONS

### General Conditions

1. Any person conducting operations under this exemption shall conduct a safe operation and shall not pose a risk to aviation safety.
2. Any person operating under this exemption shall not operate a UAV system in such a reckless or negligent manner so as to endanger or be likely to endanger the life or property of any person.
3. Any persons operating under this exemption shall be a minimum of 18 years of age, or be at least 16 years of age and conducting research under the supervision of an academic institution.
4. Any person conducting operations under this exemption shall subscribe for liability insurance covering risks of public liability at the levels described in subsection 606.02 (8) of the Canadian Aviation Regulations and in any case shall have no less than \$100,000 in liability insurance coverage pertaining to the operation of the UAV system.
5. The pilot operating under this exemption shall not operate the controls of a UAV if they have any reason to believe that they are suffering or are likely to suffer from fatigue, or suffering from any other condition which would render them unfit to perform their duties.
6. The pilot operating under this exemption shall not operate a UAV system within eight (8) hours after consuming an alcoholic beverage or while under the influence of alcohol or while using any drug that impairs the person faculties to the extent that the safety of the operation is endangered in any way.
7. Any person conducting operations under this exemption shall be familiar with the relevant aeronautical information that is appropriate to the intended flight, before commencing a flight.
8. Any person operating under this exemption shall not operate a UAV in any special aviation event requiring an SFOC under Part VI, Subpart 3, Division 1 of the Canadian Aviation Regulations.
9. Any person conducting operations under this exemption shall obtain permission from the owner(s) of the property on which a UAV intends to take-off/launch from and/or land/recover on.
10. Any person conducting operations under this exemption shall, prior to commencing operations, perform a site survey to assess the suitability of each location and confirm that safe operations can be conducted.
11. Any person conducting operations under this exemption shall cease operations if at any time the safety of other airspace users or persons or property on the ground is in

- jeopardy, or if the person conducting operations is unable to comply with the conditions of this exemption.
12. A copy of the following documents shall be accessible to any person conducting operations under this exemption:
    - a. This exemption;
    - b. Proof of liability insurance coverage;
    - c. Name, address and telephone number of the UAV operator; and
    - d. A copy of the UAV system operating limitations.
  13. A person conducting operations under this exemption shall immediately produce any of the documents and/or information listed in condition 12 to a peace officer, police officer, or Transport Canada inspector upon request.
  14. No person operating under this exemption is relieved from complying with the provisions of any other relevant Acts, Regulations or laws or from any level of government.

## **Flight Conditions**

15. The pilot operating under this exemption shall maintain continuous unaided visual contact with the UAV sufficient to be able to maintain operational control of the UAV, know its location and be able to scan the airspace in which it is operating to decisively see and avoid other air traffic or objects.
16. The pilot operating under this exemption shall not use a first person view device.
17. The pilot operating under this exemption shall only operate a UAV from a single control station and control relays or visual observers to extend the operational area are prohibited.
18. The pilot shall operate no more than one UAV at any one time.
19. The pilot operating a UAV shall give way to manned aircraft at all times.
20. The pilot conducting operations under this exemption shall only operate a UAV during daylight hours.
21. The pilot operating under this exemption shall operate a UAV at or below 300 feet above ground level (AGL).
22. The pilot conducting operations under this exemption shall only operate a UAV in Class G airspace.
23. The pilot operating under this exemption shall not operate a UAV over a forest fire area, or over any area that is located within five nautical miles of a forest fire area.
24. The pilot operating under this exemption shall not operate a UAV in airspace that has been restricted by the Minister under Section 5.1 of the Aeronautics Act.
25. The pilot operating under this exemption shall only operate a UAV at least five (5) nautical miles away from the centre of any aerodrome.

26. The pilot operating under this exemption shall only operate a UAV at least five (5) nautical miles from a built up area.
27. The pilot operating under this exemption shall operate a UAV at a lateral distance of at least 100 feet from any building, structure, vehicle, vessel or animal not associated with the operation and at least 100 feet from any person.
28. The pilot operating under this exemption shall not operate a UAV over an open-air assembly of persons.
29. The pilot conducting operations under this exemption shall only operate a UAV under visual meteorological conditions, clear of cloud with not less than two (2) statute miles ground visibility.
30. The pilot conducting operations under this exemption shall be able to take immediate active control of a UAV at all times.
31. The pilot conducting operations under this exemption shall establish and follow normal, lost link and emergency procedures, including those established by the manufacturer.
32. Any person conducting operations under this exemption shall confirm that no unacceptable radio frequency interference to the UAV system is present prior to flight, nor is likely to be present during flight.
33. The pilot operating under this exemption shall not operate a UAV system unless it is operated in accordance with the operating limitation specified by the manufacturer.
34. The pilot operating under this exemption shall not conduct a take-off/launch of a UAV if explosive, corrosive, bio-hazard or bright light emitting (laser) payloads are carried onboard.
35. Any person conducting operations under this exemption shall ensure that the appropriate air traffic service unit(s) is advised immediately anytime the flight of a UAV inadvertently enters into controlled airspace.

### **Pilot training Condition**

36. The pilot conducting operations under this exemption shall be appropriately trained on the UAV system and qualified for the area and type of operation as referred to in Transport Canada guidance material.

### **UAV System Condition**

37. Any person conducting operations under this exemption shall ensure that a UAV system is in a fit and safe state for flight prior to take-off/launch.

## **VALIDITY**

This exemption is in effect until the earliest of the following:

- a. December 21, 2016 at 23:59 (EST);
- b. the date on which any one of the conditions set out in this exemption is breached;
- c. the date on which this exemption is cancelled in writing by the Minister, where she is of the opinion that the exemption is no longer in the public interest, or that it is likely to adversely affect aviation safety.

Dated at Ottawa, Ontario, Canada this 26th day of November, 2014, on **behalf of the Minister of Transport**.

***"Original signed by Aaron McCrorie (for)"***

Martin J. Eley  
Director General  
Civil Aviation

## **APPENDIX A: EXCERPTS FROM THE CANADIAN AVIATION REGULATIONS**

### **101.01**

*"model aircraft"*

*"model aircraft"* means an aircraft, the total weight of which does not exceed 35 kg (77.2 pounds), that is mechanically driven or launched into flight for recreational purposes and that is not designed to carry persons or other living creatures; (modèle réduit d'aéronef)

[...]

*"unmanned air vehicle"*

*"unmanned air vehicle"* means a power-driven aircraft, other than a model aircraft, that is designed to fly without a human operator on board; (véhicule aérien non habité)

[...]

**602.41** No person shall operate an unmanned air vehicle in flight except in accordance with a special flight operations certificate or an air operator certificate.

[...]

**603.65** This Division applies in respect of the following flight operations when not conducted under Part VII:

[...]

d. the operation of an unmanned air vehicle;

[...]

**603.66** No person shall conduct a flight operation referred to in section 603.65 unless the person complies with the provisions of a special flight operations certificate issued by the Minister pursuant to section 603.67.

**603.67** Subject to section 6.71 of the Act, the Minister shall, on receipt of an application submitted in the form and manner required by the Special Flight Operations Standards, issue a special flight operations certificate to an applicant who demonstrates to the Minister the ability to conduct the flight operation in accordance with the *Special Flight Operations Standards*.

**Date de modification :**

2014-11-27