



SPECIAL FLIGHT OPERATIONS CERTIFICATE
Unmanned Aerial Vehicle
- Complex -

Certificate Number ATS- 18-19-00002138
File Number 2018-0325

Pursuant to section 603.67 of the Canadian Aviation Regulations, this constitutes your Special Flight Operations Certificate (SFOC), for the operation of a small unmanned air vehicle (UAV) system operated within visual line-of-sight, issued under the authority of the Minister pursuant to the Aeronautics Act.

Approval of this Certificate is based on the information provided in your SFOC application and accompanying documentation, detailed in ATS- 18-19-00002138

Nothing in this Certificate shall be held to relieve the UAV operator from requirements to comply with the provisions of such Canadian Aviation Documents as may have been issued pursuant to the Aeronautics Act or the Canadian Aviation Regulations.

Pursuant to Section 6.71 of the Aeronautics Act, this Certificate may be suspended or cancelled at any time by the Minister for cause, including failure on the part of the UAV operator, its servants or agents to comply with the provisions of the Aeronautics Act and the Canadian Aviation Regulations. This Certificate is not transferable.

Legal Name and Address of the UAV System Operator

This Certificate is issued to, hereafter referred to as the UAV operator.

Name: Tony Slavin

Company: o/a DRONEPILOTS.CA

Address: 113 Bloor St. East, Oshawa, Ontario, L1H 3M3

Validity Period of this Certificate

This Certificate is valid for the following dates or until it is amended, extended, suspended or cancelled.

Valid from: 2018-05-22 Valid to: 2019-05-18

This Certificate will cease to be valid on the date which regulations pertaining to Small UAVs operated visual line-of-sight come into force in the Canadian Aviation Regulations.

Type and Purpose of the Operation Authorized

This Certificate is valid for the operation of the

Make/Model 1: DJI Phantom 3

Make/Model 2: DJI Phantom 4

Make/Model 3: NIL

for the following purpose(s):

- Aerial Videography, Aerial Survey, Aerial Application, Aerial Photography, Aerial Inspection, Aerial Work

Other Purpose: NIL

at the following location(s):

Locations: Ontario



This Certificate is subject to the following conditions:

Specific Conditions

- (1) The UAV shall only be operated within visual line-of-sight (VLOS).
- (2) The pilot of the UAV shall give way to manned aircraft at all times.
- (3) The pilot shall only operate the UAV in the applicable visual meteorological conditions,
 - (a) within controlled airspace 3SM visibility, 500 feet from cloud (vertical), and 1SM from cloud (horizontal), and
 - (b) within uncontrolled airspace 2SM visibility, and clear of cloud.
- (4) UAV operations at night are prohibited.
- (5) No pilot shall operate the UAV unless they are familiar with the available information that is relevant to the intended flight, including:
 - (a) the appropriate aeronautical charts;
 - (b) the *Canada Flight Supplement* and the *Designated Airspace Handbook*; and
 - (c) any NOTAMs for the proposed area of operations.
- (5) Operations within Class F Restricted airspace are prohibited.
- (6) The UAV may only be operated in the following classes of airspace,
 - Class C
 - Class D
 - Class E
 - Class G
- (7) No pilot shall operate a UAV at a height:
 - (a) above **200 feet** above ground level (AGL); or
 - (b) above **100 feet** above the highest of any building or structure, if the UAV remains at a lateral distance of 200 feet or less from the building or structure and is operated at a distance greater than 1 nautical mile from any aerodrome.
- (9) When required, the UAV operator shall coordinate with air traffic services unit responsible for supplying air traffic services for the area of operation well in advance of the proposed operations.
- (10) The UAV operator shall conduct a site survey in accordance with the procedures outlined in the SFOC application prior to commencing operations at each location.

General Operating Conditions

- (1) The following documents shall be immediately available to the pilot any time the UAV is in operation:
 - (a) a copy of this certificate;
 - (b) a copy of the completed Application for a Special Flight Operations Certificate (SFOC), form 26-0835 for the operation underway and any documents required therein;
 - (c) evidence of permission from the owner(s) of the property from which the UAV operator intends to take-off and/or land;
 - (d) a copy of the site survey for the operation underway;
 - (e) a copy of the lost link procedures for the area of operations; and
 - (f) government issued photo identification.
- (2) The UAV operator conducting operations under this certificate shall immediately produce any documents required to be kept by this certificate for inspection in accordance with the terms of a demand made by a peace officer, an immigration officer or the Minister.
- (3) The UAV operator shall notify the Minister within 10 working days after:
 - (a) changing its legal name, trade name, main base, any contact information, and
 - (b) ceasing to operate models of UAV systems authorized under this certificate.
- (4) The UAV operator shall not require any pilot to operate the controls of the UAV if either the pilot or the UAV operator has any reason to believe that the pilot is suffering or is likely to suffer from fatigue so that they are unfit to perform their duties.
- (5) No pilot shall operate the UAV system within eight hours after consuming an alcoholic beverage or while under the influence of alcohol or while using any drug that impairs the person's faculties to the extent that the safety of the operation is endangered in any way.
- (6) Every crew member engaged in the operation of the UAV system shall comply with the instructions of the pilot-in-command.
- (7) Only one UAV shall be operated in-flight by a single pilot at any one time.



- (8) No pilot shall operate the UAV unless it is operated in accordance with the operating limitations specified by the UAV manufacturer.
- (9) No pilot shall conduct a take-off/launch of the UAV for which the manufacturer has provided a UAV operating manual unless the manual is immediately available to crew members at their duty station
- (10) The UAV operator shall not permit the use of a portable electronic device at the control station of a UAV system where the device may impair the functioning of the systems or equipment.
- (11) No pilot shall create a hazard to persons or property on the surface by dropping an object from the UAV in flight.
- (12) The UAV operator shall not operate the UAV system, where visual observers are used as part of the sense and avoid function unless reliable communication is established and maintained between the visual observer and the pilot and standard operating procedures are followed.
- (13) The UAV operator shall ensure that visual observers perform observation duties for only one UAV.
- (14) The UAV operator shall not permit visual observer functions to be performed from a moving surface vehicle.
- (15) No pilot shall use a first person view device, unless accompanied by a visual observer who is providing the sense and avoid function.
- (16) Prior to conducting flight, the pilot shall ensure that the UAV System is in an airworthy condition.
- (17) The UAV operator shall not permit UAV operations to be conducted unless the following operational and emergency equipment is immediately available to the appropriate crew member(s):
 - (a) checklists or placards that enable the UAV system to be operated in accordance with the UAV system flight manual; and
 - (b) a means of extinguishing any fires that are likely to occur.
- (18) The UAV shall not be equipped with an ELT.
- (19) No pilot shall conduct a take-off/launch of the UAV unless there is a means of:
 - (a) Controlling the flight of the UAV;
 - (b) Monitoring the UAV system;
 - (c) Navigating;
 - (d) Communication, as required by the class of airspace regulation;
 - (e) Detecting hazardous environmental flight conditions;
 - (f) Mitigating the risk of loss of control of the UAV trajectory, where applicable;
 - (g) Sensing and avoiding other aircraft;
 - (h) Avoiding flight into obstacles and terrain;
 - (i) Aircraft lighting or illumination, for operations between sunset and sunrise, sufficient to maintain safe visual line-of-sight operations; and
 - (j) Remaining clear of cloud to the distance required for the airspace and operation.
- (20) The UAV operator shall ensure that the UAV is not flown if it has been subjected to any abnormal occurrence unless it has been inspected for damage.
- (21) The UAV operator shall maintain records of their operations to include the following information:
 - (a) Location, date, times, crew, and aircraft type for each flight;
 - (b) Flight hours accumulated per aircraft;
 - (c) Pilot(s) flight hours per day, month, year; and
 - (d) Inspections, defects, and defect rectification.
- (22) The UAV operator shall maintain the records identified in the condition above for a period of time equal to the validity period of this certificate plus one (1) year beyond the expiry date.
- (23) The UAV operator shall have subscribed for adequate liability insurance covering risks of public liability at the levels described in subsection 606.02 of the Canadian Aviation Regulations.
- (24) The UAV operator shall adhere to the security plan in accordance with the information provided in the SFOC application.
- (25) The UAV operator shall adhere to the emergency contingency plan in accordance with the information provided in the SFOC application.
- (26) The UAV operator shall maintain an adequate management organization that is capable of exercising supervision and operational control over persons participating in the operation.
- (27) The UAV operator shall maintain UAV systems that are properly equipped for the area of operation and the type of operation.
- (28) The UAV operator shall cease operations if at anytime the safety of other airspace users, persons or property on the ground are in jeopardy or if unable to comply with the conditions of this certificate.



- (29) The UAV operator is responsible for obtaining permission from the owner(s) of the property from which the UAV intends to take-off from and/or land from.
- (30) Any NOTAM requirement for operations under this Certificate shall be determined by Transport Canada prior to issuance.

General Flight Conditions

- (1) No pilot shall operate the UAV system in such a reckless or negligent manner as to endanger or be likely to endanger the life or property of any person.
- (2) The pilot shall follow the normal and emergency procedures in accordance with the information provided in SFOC application.
- (3) The pilot shall follow the lost link and fly-away procedures in accordance with the information provided in the SFOC application.
- (4) No pilot shall conduct a take-off/launch of the UAV unless the risk involved with lost link circumstances has been assessed and a determination has been made as to when auto-recovery manoeuvres or flight termination shall be initiated.
- (5) No pilot shall activate a flight termination system, if the UAV is so equipped, in such a manner as to endanger other airspace users or persons or property on the ground.
- (6) No pilot shall conduct a take-off/launch of the UAV if it has frost, ice, or snow adhering to any of its critical surfaces.
- (7) No pilot shall conduct a take-off/launch of the UAV if explosive, corrosive, or bio-hazardous payloads are carried on-board.
- (8) The pilot shall confirm that no unacceptable radio frequency interference is present prior to flight, nor is likely to be present during flight.
- (9) No pilot shall operate the UAV in known or forecast icing conditions.
- (10) The pilot, if being provided air traffic control instructions or clearances, shall comply with section 602.31 of the *Canadian Aviation Regulations*.
- (11) No pilot shall enter transponder airspace without the UAV being equipped with a transponder and automatic pressure-altitude reporting equipment, unless authorization has been received from the applicable air traffic control unit.
- (12) The pilot-in-command shall provide the air traffic service unit(s) affected by the flight operation with the same information that would be required if the pilot was filing an ICAO (International Civil Aviation Organization) flight plan, before commencing flight.
- (13) Where the UAV is operated at or in the vicinity of an aerodrome, the pilot shall ensure that the UAV is flown in a manner so as to remain clear of the take-off, approach and landing routes and the pattern of traffic formed by manned aircraft operating at the aerodrome.
- (14) The pilot shall comply with sections 602.97 through 602.101 of the *Canadian Aviation Regulations* if operating in the vicinity of an uncontrolled aerodrome.
- (15) The pilot shall ensure that the appropriate frequency is continuously monitored throughout the duration of the flight, whenever two-way radio communications is required.
- (16) The pilot shall ensure that the appropriate air traffic control service unit(s) is advised immediately anytime the flight of the UAV is no longer under the control of the pilot and inadvertent entry into controlled airspace occurs or is likely to occur.
- (17) No pilot shall operate the UAV at a lateral distance of less than 100 feet from any person, operating vehicle or operating vessel unless:
 - (a) only persons inherent to the operation are present; and
 - (b) the vehicle or vessel is the subject of the aerial work.
- (18) No pilot shall operate a UAV at a lateral distance less than 100 feet from the general public, spectators, bystanders or any person not associated with the operation.
- (19) No pilot shall operate the UAV over or within an open-air assembly of persons.
- (20) The pilot or visual observer(s) must maintain continuous unaided 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.
- (21) No pilot shall operate the UAV over or within a forest fire area, a natural hazard or disaster area, or over any area that is located within (5) five nautical miles of a forest fire area, natural hazard area, or disaster area.
- (22) No pilot shall operate the UAV in airspace that has been restricted by the Minister under Section 5.1 of the *Aeronautics Act*.

Personnel Conditions

- (1) The UAV operator shall ensure that all personnel are appropriately trained and qualified for the area of operation and the type of operation.



- (2) The UAV operator shall ensure that all pilots, visual observers, maintainers, payload operators are a minimum of 18 years of age.
- (3) No pilot shall operate the UAV unless they are medically fit to conduct their required duties.
- (4) All persons connected with this operation shall be familiar with the contents of this certificate.

UAV System Conditions

- (1) The UAV operator shall ensure that all maintenance, servicing, and disassembly-assembly of the UAV and associated components are performed in accordance with procedures described in the SFOC application, and at a minimum, the manufacturer's specifications and schedule.
- (2) The UAV operator shall ensure that the requirements of any airworthiness directives, or equivalent, issued by the manufacturer have been completed.
- (3) The UAV operator shall ensure that all UAV system equipment required for safe flight operations is serviceable.

Incident/Accident Reporting

- (1) The UAV operator shall report to Transport Canada, by email at TC.QUECentredeExpertiseUAV-UAVExpertiseCenterQUE.TC@tc.gc.ca, as soon as possible, details of any of the following aviation occurrences during the operations of the UAV:
 - (a) Injuries to any person requiring medical attention;
 - (b) Unintended contact between the UAV and persons, livestock, vehicles, vessels, or other structures;
 - (c) Unanticipated damage incurred to the airframe, control station, payload or command and control links that adversely affect the performance or flight characteristics of the UAV;
 - (d) Anytime the UAV is not kept within the geographic boundaries and/or altitude limits as outlined in this certificate;
 - (e) Any collision or risk of collision with other aircraft;
 - (f) Anytime the UAV becomes uncontrollable, experiences a fly-away or is missing; and
 - (g) Any other incident that results in a Canadian Aviation Daily Occurrence Report (CADORS).
- (2) The UAV operator shall not operate the UAV following any of the aviation occurrences listed in the condition above, until such time as this office approves its further operation. Any such approval for resumption of operations shall be documented.

Dated at Toronto Ontario

on 17 May, 2018

on behalf of the Minister of Transport.

Paul Baldasaro

Technical Team Lead, Flight Operations

Transport Canada

All inquiries regarding this certificate should be directed to

Civil Aviation Services

Telephone: 416-952-0244

Email: tc.aviationservicesont-servicesaviationont.tc@tc.gc.ca