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# **FLIGHT TEST GUIDE**

## Ultra-light Aeroplane

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# FLIGHT TEST GUIDE

## ULTRA-LIGHT AEROPLANE

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This flight test guide sets out the techniques, procedures and the marking criteria that will be used by Civil Aviation Inspectors and Pilot Examiners for the conduct of the flight test required to demonstrate the skill requirements for the issuance of a Passenger Carrying Rating and a Flight Instructor Rating – Ultra-light Aeroplane.

Flight Instructors are expected to use this guide when preparing candidates for flight tests. Candidates should be familiar with this guide and refer to the qualification standards during their training.

### *Definitions*

- “examiner”** means a Pilot Examiner accredited under section 4.3 of Part 1 of the *Aeronautics Act* or a Civil Aviation Inspector authorized to conduct this flight test.
- “flight test item”** means a task, manoeuvre or exercise listed on the flight test report.
- “operating manual”** is used as a generic term that applies to a document provided by the aircraft manufacturer or owner that outlines aircraft operating procedures and limitations. In actual fact, it may be given any number of titles including pilot operating handbook, aircraft flight manual or aircraft operating manual.

For more information, visit our web site at

<http://www.tc.gc.ca/civilaviation/general/flttrain/Planes/menu.htm>

Également disponible en français

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## **GENERAL**

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### ***Admission to a Flight Test***

In order to be admitted to an ultra-light aeroplane flight test, or a complete re-test, and meet the requirements of CAR 421.14, the candidate will present:

- (a) photo identification;
- (b) either a valid:
  - (i) Pilot Permit – Ultra-light Aeroplane,
  - (ii) Pilot Permit – Recreational – Aeroplane,
  - (iii) Licence, or
  - (iv) Student Pilot Permit – Ultra-light Aeroplane;
- (c) proof of meeting the medical standards for the Passenger Carrying Rating;
- (d) a letter from a qualified flight instructor certifying that:
  - (i) the instructor has personally completed a pre-flight test evaluation with the candidate;
  - (ii) the candidate is considered to have reached a sufficient level of competency to complete the ultra-light aeroplane flight test; and
  - (iii) the instructor recommends the candidate for the flight test, and
- (e) a completed form 26-0667 Ultra-light Aeroplane Flight Test Report / Application for Passenger Carrying Rating which indicates that:
  - (i) an applicant for a Passenger Carrying Rating – Ultra-light Aeroplane has met all of the experience requirements required for the passenger carrying rating, or
  - (ii) an applicant for a Flight Instructor Rating has completed a minimum of 25 hours of the total flying experience required for the flight instructor rating.

### ***Admission to a Partial Flight Test***

A partial flight test must be conducted within 60 days following the date of the failed complete flight test. Prior to admission to a partial flight test, the candidate will provide the requirements of (a), (b) (c) and (e) above, and:

- (a) a copy of the flight test report for the previously failed flight test; and
- (b) a letter, signed by the holder of a valid Flight Instructor Rating –Ultra-light Aeroplane or a valid Flight Instructor Rating - Aeroplane, certifying that the candidate:
  - (i) has received further training on the failed flight test item(s);
  - (ii) is considered to have reached a sufficient level of competency to successfully complete the flight test; and
  - (iii) is recommended by the instructor for the flight test.

### ***Letters of Recommendation***

Letters of recommendation must be dated within 30 days prior to the flight test. In the case of a re-test, the person who conducted the additional training will sign the letter of recommendation.

### ***Aircraft and Equipment Requirements***

The candidate will provide:

The candidate will provide:

- (a) an aeroplane that:
  - (i) is an ultra-light aeroplane (two or three axis control, weight shift control or powered parachute aircraft);
  - (ii) has a Special Certificate of Airworthiness – Amateur-Built and meets the definition of a basic ultra-light aeroplane;
  - (iii) has a Special Certificate of Airworthiness – Owner Maintenance and meets the definition of a basic ultra-light aeroplane; or
  - (iv) has a Certificate of Airworthiness and meets the definition of a basic ultra-light aeroplane; and
- (b) appropriate current aeronautical charts and Canada Flight Supplement.

In all cases of (a) the aircraft must meet the requirements of CAR Standard 425.23 Training Aircraft Requirements subsection (2) of the *Personnel Licensing Standards* and must be adequately equipped to permit the candidate to conduct the manoeuvres required for the flight test and to permit the examiner to assess the candidate's performance.

In the case of (a) (i) where an ultra-light aeroplane is used for the flight test, the aircraft must meet the equipment requirements outlined in CAR 605.14.

In the case of (a) (ii)-(iv) where an aeroplane is used for the flight test that has a flight authority pursuant to CAR 507, that authority must have no operating limitations that prohibit the performance of the required manoeuvres.

### ***Flight Test***

All of the flight test items listed on the flight test report and described in this guide must be completed and the minimum pass mark of **30** (50%) for powered parachute, weight shift and two axis aircraft or **32** (50%) for all other aircraft must be achieved.

All flight tests will be conducted when weather permits safe completion of the required items, the aircraft is ready for flight and the candidate and the aircraft's documents, as required by the *Canadian Aviation Regulations*, are valid. It is the sole responsibility of the examiner to make the final decision as to whether or not any portion or all of the flight test may be conducted.

### ***Repeated Flight Test Item***

A flight test item or manoeuvre will not be repeated unless one of the following conditions applies:

- (a) **Discontinuance:** Discontinuance of a manoeuvre for valid safety reasons; i.e., a go-around or other procedure necessary to modify the originally planned manoeuvre.
- (b) **Collision Avoidance:** Examiner intervention on the flight controls to avoid another aircraft which the candidate could not have seen due to position or other factors.
- (c) **Misunderstood Requests:** Legitimate instances when the candidate did not understand an examiner's request to perform a specific manoeuvre. A candidate's failure to understand the nature of a specified manoeuvre being requested is not grounds for repeating an exercise or manoeuvre.
- (d) **Other Factors:** Any condition under which the examiner was distracted to the point that he or she could not adequately observe the candidate's performance of the manoeuvre (radio calls, traffic, etc.).

**Note:** These provisions have been made in the interest of fairness and do not mean that instruction, practice, or the repeating of an item or manoeuvre, that was unacceptably demonstrated, is permitted during the flight test evaluation process.

### ***Incomplete Flight Test***

If the test is not completed due to circumstances beyond the candidate's control, the subsequent flight test will include the flight test items not completed on the original flight test and will be completed within the 30 days of the original letter of recommendation.

The following process will apply:

- a) a copy of the flight test report must be given to the candidate;
- b) the flight test may be completed at a later date;
- c) the test may be completed by the same or another examiner;
- d) the original letter of recommendation remains valid;
- e) flight test items already assessed will not be re-tested, but items already demonstrated during the initial flight, and repeated for the purpose of the second flight, may be re-assessed as "Below Standard" (1), if the candidate displays unsafe or dangerous flying;
- f) the original flight test report may be used to complete the test, or two separate reports may be submitted; and
- g) the candidate is permitted to complete additional training while awaiting completion of the test.

If the initial flight test included one or two failed flight test items, the partial flight test for these items may be conducted during the subsequent flight test flight, after the candidate has completed all of the required items, provided:

- a) the minimum pass mark has been achieved;
- b) no additional items were failed during the subsequent flight test; and
- c) a letter of recommendation for the partial flight test was received prior to the flight.



### ***Failure of a Flight Test***

Failure to obtain the minimum pass mark or the failure of any flight test item constitutes failure of the flight test. The failure of one or two items will require a partial flight test on those items, and the failure of a third item will require a complete re-test.

The examiner will stop a test, assess it “Failed”, and a complete re-test will be required if the candidate jeopardizes safety by:

- a) displaying unsafe or dangerous flying; or
- b) demonstrating a pattern of failing to use proper visual scanning techniques to check for traffic before and while performing visual manoeuvres.

Following a failed flight test, the candidate will obtain a copy of the flight test report to meet the requirements for admission to a partial flight test.

If not satisfied with the outcome of the flight test, a candidate may wish to file a written complaint regarding the conduct of a flight test or the performance of an examiner with the Transport Canada Regional Office responsible for that pilot examiner. In order to succeed with a complaint, the applicant will have to satisfy Transport Canada that the test was not properly conducted. Mere dissatisfaction with the flight test result is not enough. After due consideration of the individual case, the Regional Superintendent – Flight Training, may authorize a re-test to be conducted, without prejudice (with a clean record in regard to the disputed flight test), by a Civil Aviation Inspector or alternate pilot examiner. Should the complaint not be addressed to the candidate’s satisfaction, the procedure to be followed is outlined in ‘Civil Aviation Complaint Filing Procedures’. The document may be found at:

<http://www.tc.gc.ca/CivilAviation/QualityAssurance/QA/complaints/filing.htm>

### ***Partial Flight Test***

Provided that the applicable pass mark has been achieved and there are no more than two failed flight test items, the skill requirement may be met by completing a partial flight test of the item or items assessed “Below Standard”.

The candidate will be required to successfully perform the item(s) assessed as “Below Standard” on the complete flight test. Flight test items other than the item(s) to be retested, but repeated for the purpose of the second flight, may be re-assessed as “Below Standard” if their aim is not achieved or safety is compromised.

The partial flight test must be completed within 60 days of the original complete flight test. No more than one partial flight test will be allowed for each complete flight test.

### ***Complete Re-test***

A complete re-test will be required in the following situations:

- (a) the required pass mark is not obtained during a complete flight test;
- (b) failure of more than two items during a complete flight test;
- (c) failure of a flight test item during a partial flight test;
- (d) dangerous flying;
- (e) a demonstrated pattern of failing to use proper visual scanning techniques is displayed during the flight test; or
- (f) a partial flight test is not completed within 60 days of the original complete flight test.

### ***Pre-Test Briefing***

Pilot examiners are required to brief test candidates on the following details:

- (a) **The sequence of flight test items.** There is no need for the candidate to memorize this sequence, as the examiner will give instructions for each item.
- (b) **If in doubt - Ask!** Candidates who do not clearly understand what they are being asked to do should feel free to ask. It may be that the examiner was not clear in giving instructions.
- (c) **Who is pilot-in-command?** The pilot-in-command should be the flight test candidate and, if the examiner is a Transport Canada employee, it will always be the flight test candidate.
- (d) **Who will do what in the event of an actual emergency?** A briefing by the candidate should detail the actions to be taken by the candidate and the examiner in the event of an actual emergency.
- (e) **How to transfer control.** There should never be any doubt as to who is flying the aircraft so proper transfer of control using phrases such as "You have control" and "I have control" is expected during a flight test. A visual check is recommended to verify that the exchange has occurred.
- (f) **Ground references.** Intended touchdown zones and specific touchdown points. For the approach and landing, when the examiner specifies simulated conditions, the examiner must be clear about the simulated conditions, such as surface conditions, obstacles on approach, runway threshold or length of surface available to the candidate.
- (g) **Method of simulating emergencies.** What method will be used? Verbal? Engine failures will only be simulated in accordance with the manufacturer's recommendations or, in their absence, by closing the throttle or by reducing power to flight idle. The moving of mixture controls to idle cut-off will only be used where specifically recommended by the manufacturer. The practice of closing fuel valves, shutting off magneto switches or pulling of circuit breakers will not be used during a flight test.

### ***Flight Management***

Flight management refers to the effective use of all available resources, including working with such groups as air traffic controllers. Poor performance of an exercise or task can often be explained by weaknesses in flight management competencies.

### **Problem Solving and Decision Making**

- a) anticipates problems far enough in advance to avoid crisis reaction
- b) uses effective decision-making process
- c) makes appropriate inquiries
- d) prioritizes tasks to gain maximum information input for decisions
- e) makes effective use of all available resources to make decisions
- f) considers “downstream” consequences of the decision being considered

### **Situational Awareness**

- (a) actively monitors weather, aircraft systems, instruments, ATC communications
- (b) avoids “tunnel vision” - awareness that factors such as stress can reduce vigilance
- (c) stays “ahead of the aircraft” in preparing for expected or contingency situations
- (d) remains alert to detect subtle changes in the environment

### **Communication**

- (a) provides thorough briefings
- (b) asks for information and advice
- (c) communicates decisions clearly
- (d) asserts one’s position appropriately

### **Workload Management**

- (a) organizes cockpit resources well
- (b) recognizes overload in self
- (c) eliminates distractions during high workload situations
- (d) maintains ability to adapt during high workload situations

### ***Airmanship***

The candidate's airmanship will be assessed along with other factors in determining the mark awarded for each item. Items such as looking out for other aircraft, use of checklists, consideration for other aircraft on the ground and in the air, choice of run-up areas, choice of runways and clearing the engine during prolonged glides will be assessed. The candidate will be expected to demonstrate good airmanship and complete accurate checks on a continuing basis.

### ***Flight Test Results***

The *Privacy Act* protects the privacy of individuals with respect to personal information about themselves held by a government institution. A flight test measures the performance of the candidate for the flight test, the examiner conducting the flight test and the instructor who recommended the candidate. All of these are identified on the Flight Test Report along with the Flight Training Unit responsible for the training.

Personal information may be disclosed in accordance with Section 8(2)(a) of the *Act*, which allows disclosure... "for the purpose for which the information was obtained or compiled by the institution or for a use consistent with that purpose". The purpose for which flight test information is obtained is to ensure the safety of aviation in Canada. The specific purposes are to measure whether the candidate meets the minimum skill standard for the rating, whether the recommending instructor is performing competently as an instructor and whether the examiner is conducting the test in accordance with the standards.

In accordance with 8(2)(a) of the *Privacy Act*, a copy of the flight test report will be given to the candidate for a flight test and a copy will be retained by the examiner who conducted the flight test. A copy may also be given to the instructor who recommended the candidate for the flight test and to the chief flight instructor responsible for the quality of flight training at the Flight Training Unit where the training was conducted. Specific information about the results of a flight test will not be given by Transport Canada to anyone but the individuals named on the flight test report, except in accordance with the *Privacy Act*.

### ***Assessment of Flight Test Performance***

The "*Performance Criteria*" section of each flight test item prescribes the marking criteria. These criteria assume no unusual circumstances as well as operation of the aircraft in accordance with the manufacturer's specifications, recommended speeds and configurations as outlined in the operating manual.

Throughout the flight test, the candidate is evaluated on the use of an appropriate checklist. Proper use is dependent on the specific task being evaluated and the aircraft configuration. The situation may be such that the use of the written checklist, while accomplishing the elements of the "*Aim*", would be either unsafe or impractical. It is acceptable for certain checks to be conducted by memory. When a checklist is used, division of attention and proper visual scanning techniques should be considered.

Consideration will be given to unavoidable deviations from the published criteria due to weather, traffic or other situations beyond the reasonable control of the candidate. To avoid the need to compensate for such situations, tests should be conducted under normal conditions whenever possible.

The following general performance tolerances will apply, allowing for deviations due to turbulent conditions and the handling qualities and performance of the aircraft used:

Altitude	Normal flight	±100 feet
	Pilot navigation	±200 feet
Airspeed	All flight regimes	+10/-0 mph

### ***Point Marking Scale***

When applying the 4-point scale, award the mark that best describes the weakest element(s) applicable to the candidate’s performance. Remarks to support mark awards of 1 or 2 must link to a safety issue, a qualification standard, or an approved technique or procedure.

<p><b>4.</b> <b>Above Standard</b></p>	<p>Performance remains well within the qualification standards and flight management skills are excellent.</p>	<p>Performance is ideal under existing conditions. Aircraft handling is smooth and precise. Technical skills and knowledge exceed the required level of competency. Behaviour indicates continuous and highly accurate situational awareness. Flight management skills are excellent. Safety of flight is assured. Risk is well mitigated.</p>
<p><b>3.</b> <b>Standard</b></p>	<p>Minor deviations occur from the qualification standards and performance remains within prescribed limits.</p>	<p>Performance meets the recognised standard yet may include deviations that do not detract from the overall performance. Aircraft handling is positive and within specified limits. Technical skills and knowledge meet the required level of competency. Behaviour indicates that situational awareness is maintained. Flight management skills are effective. Safety of flight is maintained. Risk is acceptably mitigated.</p>
<p><b>2.</b> <b>Basic Standard</b></p>	<p>Major deviations from the qualification standards occur, which may include momentary excursions beyond prescribed limits but these are recognized and corrected in a timely manner.</p>	<p>Performance includes deviations that detract from the overall performance, but are recognized and corrected within an acceptable time frame. Aircraft handling is performed with limited proficiency and/or includes momentary deviations from specified limits. Technical skills and knowledge reveal limited technical proficiency and/or depth of knowledge. Behaviour indicates lapses in situational awareness that are identified and corrected. Flight management skills are effective but slightly below standard. Safety of flight is not compromised. Risk is poorly mitigated.</p>
<p><b>1.</b> <b>Below Standard</b></p>	<p>Unacceptable deviations from the qualification standards occur, which may include excursions beyond prescribed limits that are not recognized or corrected in a timely manner.</p>	<p>Performance includes deviations that adversely affect the overall performance, are repeated, have excessive amplitude, or for which recognition and correction are excessively slow or nonexistent, or the aim of the task was not achieved. Aircraft handling is rough or includes uncorrected or excessive deviations from specified limits. Technical skills and knowledge reveal <u>unacceptable</u> levels of technical proficiency and/or depth of knowledge. Behaviour indicates lapses in situational awareness that are <u>not</u> identified or corrected. Flight management skills are ineffective. Safety of flight is compromised. Risk is unacceptably mitigated.</p>

### ***How to Pass the Flight Test***

Instructors prepare their students for the flight test with every training trip. They do this by helping the student master all the flight test exercises, but they also let the student take more and more responsibility for decision-making with each lesson, so the student will be fully ready to make **all** the decisions during the flight test.

Here are some tips on how to pass the flight test:

- (a) Review the flight test guide with your instructor before the flight test.
- (b) An instructor will do a pre-test evaluation, a simulated flight test, before recommending you for the real test.
- (c) Be rested.
- (d) Arrive early.
- (e) The test measures your skill, item by item. If you think you did poorly on one item, try very hard to focus on the immediate task and don't let yourself be pre-occupied with an item you already completed. Besides, you may have done better than you thought.
- (f) Don't be afraid to ask the examiner if you are unsure what is expected of you. The examiner will either tell you what you need to know or tell you that you have to work with the information you have. You can't lose by asking.
- (g) Tell the examiner what you are planning to do before you do it.
- (h) The flight test is not a race. Don't put additional pressure on yourself by rushing.
- (i) "Visualize" the flight test in advance by thinking through all the manoeuvres you will perform and developing mental pictures of what you are going to be doing.
- (j) Difficult as this may be, try to think of the examiner as your very first passenger with your new rating. Keep the examiner informed, as you would keep a passenger informed.

# **FLIGHT TEST EXERCISES**

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## **AIRCRAFT FAMILIARIZATION**

### **1. Documents**

#### ***Aim***

To determine that the candidate can correctly assess the validity of documents required on board and, from these documents, determine that the aircraft is ready for flight.

#### ***Description***

The candidate will be required to determine the validity of all documents required to be carried on board the aircraft and determine that any required maintenance certifications have been completed.

#### ***Performance Criteria***

Assessment will be based on the candidate's ability to:

- (a) determine if the documents required on board are valid;
- (b) in the case of an advanced ultra-light aeroplane, determine if the required maintenance actions have been completed and modifications approved, indicating that the aircraft is fit for the proposed period of flight;
- (c) in the case of an aeroplane that has a flight authority, determine if the maintenance release ensures aeroplane serviceability and currency of inspection for the proposed period of flight and ensures that any conditions or limitations on the maintenance release can be complied with;
- (d) determine the number of flying hours remaining before the next service or maintenance task; and
- (e) determine the impact of deferred defects on aircraft operations for the proposed flight.



## **2. Aircraft Performance and Limitations/Weight and Balance**

### ***Aim***

- (a) To determine that the candidate can demonstrate a practical knowledge of the recommended operating procedures, performance capabilities and limitations for the aircraft being used for the flight test;
- (b) To determine that the candidate can correctly complete weight and balance calculations for the aircraft used for the flight test.

### ***Description***

The candidate will be required to state or calculate recommended operating procedures, performance capabilities and limitations for the aircraft to be used on the flight test. Essential performance speeds will be quoted from memory. Other aircraft performance data may be determined from the operating manual.

The candidate will be required, using actual weights, to apply the weight and balance data and complete accurate computations for practical loading situations applicable to the aircraft to be used in the test. If a loading graph or computer is available with the aircraft, it may be utilized. The candidate will be required to correct a situation that is described by the examiner, where the centre of gravity is out of limits or in which the gross weight has been exceeded.

### ***Performance Criteria***

Assessment will be based on the candidate's ability to:

- (a) State from memory the following speeds:
  - (i) normal climb speed(s);
  - (ii) stall speed in the landing configuration;
  - (iii) normal approach speed(s); and
  - (iv) never exceed speed.
- (b) determine from the operating manual, any other operational data for the aircraft used for the flight test;
- (c) determine if the take-off weight and centre of gravity is within permissible limits for the intended flight;
- (d) demonstrate practical knowledge of how to correct a situation in which the centre of gravity is out of limits and/or in which the gross weight is exceeded; and
- (e) explain the effects of various centre of gravity locations on aircraft flight characteristics.

## PREPARATION FOR FLIGHT

### 3. Pre-Flight Inspection

#### *Aim*

To determine that the candidate can complete internal and external checks in accordance with the operating manual and demonstrate practical knowledge of the aircraft.

#### *Description*

The candidate will be required to determine that the aircraft is ready for the intended flight.

All required equipment and documents will be located and, so far as can be determined by pre-flight inspection, the aircraft will be confirmed to be ready for flight. Visual checks for fuel quantity, proper grade of fuel and oil level will be carried out in accordance with the operating manual. Checks for fuel contamination will also be made whenever possible. If the aircraft design precludes a visual check, fuel chits, fuel logs or other credible procedures may be used to confirm the amount of fuel actually on board.

Powered parachute candidates will be required to verify that the canopy and riser system is laid out properly and in condition for inflation.

After the candidate has completed the pre-flight inspection, questions relating to the flight test aircraft will be asked. The candidate will be expected to explain what appropriate action would be taken if an unsatisfactory item were detected or described by the examiner during the pre-flight inspection. The candidate will be expected to demonstrate knowledge of the consequences if such items were undetected.

**Note:** The external and internal checks must at least cover all the items specified by the manufacturer.

The candidate will be required to conduct an oral passenger safety briefing. Should the candidate omit the passenger safety briefing the examiner will ask the candidate to provide one.

### ***Performance Criteria***

Assessment will be based on the candidate's ability to:

- (a) use an orderly procedure to inspect the aircraft including at least those items listed by the manufacturer or aircraft owner;
- (b) confirm that there is sufficient fuel and oil for the intended flight;
- (c) verify that the aircraft is in condition for safe flight;
- (d) describe the appropriate action to take for any unsatisfactory item detected or described by the examiner;
- (e) identify and verify the location and security of baggage and required equipment;
- (f) organize and arrange material and equipment in a manner that makes the items readily available; and
- (g) perform an effective passenger safety briefing that will include:
  - (i) the location and use of emergency exits, emergency locator transmitter, fire extinguisher;
  - (ii) smoking limitations;
  - (iii) use of seat belts;
  - (iv) items specific to the aircraft type being used;
  - (v) action to take in the event of an emergency landing; and
  - (vi) other items for use in an emergency.

#### **4. Engine Starting and Run-up, Use of Checklists**

##### ***Aim***

To determine that the candidate can complete engine start, warm-up, run-up, and systems checks in accordance with the checklists or placards provided by the aircraft manufacturer or owner, completing at least those items in the operating manual.

##### ***Description***

The candidate will be required to use recommended procedures in engine starting, warm-up, run-up and check aircraft systems and equipment to determine that the aircraft is ready for flight. The candidate will be asked to demonstrate or explain how to correct any unsatisfactory condition encountered or specified by the examiner.

##### ***Performance Criteria***

Assessment will be based on the candidate's ability to:

- (a) demonstrate an awareness of other persons and property before and during engine start;
- (b) use the appropriate checklist provided by the manufacturer or aircraft owner;
- (c) accurately complete the engine and aircraft systems checks;
- (d) check flight controls for freedom of operation and correct movement; and
- (e) take appropriate action with respect to unsatisfactory conditions.

## **5. ANCILLARY CONTROLS**

### ***Aim***

To determine that the candidate can operate ancillary controls/aircraft systems in accordance with the operating manual.

### ***Description***

The candidate will be required to demonstrate practical knowledge of the operation of systems installed on the aircraft being used for the flight test. Use of these systems will be evaluated both on the ground and in the air.

### ***Performance Criteria***

The candidate will be expected to operate the ancillary controls in accordance with the operating manual and explain the operation of at least one of the following systems, as specified by the examiner:

- (a) primary flight controls and trim;
- (b) flaps;
- (c) powerplant, including carburetor heat and mixture controls;
- (d) fuel or oil system;
- (e) electrical system;
- (f) avionics systems;
- (g) pitot-static system, vacuum/pressure system and associated flight instruments;
- (h) any other systems unique to the aircraft.

## **6. TAXIING (AND CANOPY INFLATION FOR POWERED PARACHUTES)**

### ***Aim***

To determine that the candidate can manoeuvre the aircraft safely and avoid unnecessary interference with movement of other traffic.

### ***Description***

The candidate will be required to taxi the aircraft to and from the runway in use and as otherwise required during the test. Provided that traffic and other conditions permit, the candidate will be expected to taxi along taxiway centrelines where they exist. The candidate will be expected to position the flight controls appropriately for wind conditions. During calm wind conditions, the examiner will specify a wind speed and direction in order to test this ability.

Powered parachute candidates will be required to exhibit knowledge of the elements of canopy inflation and taxiing.

Seaplane candidates will be required to demonstrate taxiing at slow speeds, on the step, sailing, docking or beaching, a simulated or actual approach to a buoy (mooring), and turns to downwind and into wind.

### ***Performance Criteria***

Assessment will be based on the candidate's ability to:

- (a) safely manoeuvre the aircraft, considering other traffic;
- (b) use appropriate taxiing speeds;
- (c) adhere to local taxi rules, procedures and ATC clearances and instructions;
- (d) use flight controls and brakes correctly;
- (e) identify and correctly interpret airport, taxiway, and runway signs, markings and lighting;
- (f) after landing, clear the runway area and taxi to suitable parking/refuelling area;
- (g) park the aircraft properly, considering the safety of nearby persons or property;
- (h) make smooth and appropriate throttle applications as the canopy transitions from ground pick-up through maximum drag to taxi position (powered parachute candidates only); and
- (i) safely manoeuvre the aircraft by sailing, and the ability to carrying out docking or beaching procedures, as applicable (seaplane candidates only).

## 7. TAKE-OFF

### *Aim*

To determine that the candidate can take-off safely using the correct procedure and technique for wind conditions, runway surface and length.

### *Description*

The candidate will be required to demonstrate a take-off, appropriate to the conditions that exist, or those specified by the examiner. For the purpose of this exercise, the examiner may specify simulated conditions for the take-off such as surface conditions, obstacles to be cleared and available runway length. ATC instructions and clearances must be complied with, where they are applicable.

Seaplane candidates will be expected to demonstrate a glassy water take-off if real glassy water conditions are readily available in proximity to the take-off site.

Powered parachute candidates will be required to confirm, before take-off, that the canopy is fully inflated and suspension lines are straight with no twists or tangles.

**Note 1:** The candidate will be required to explain the operational necessity for any variation from recommended speeds, e.g. gusty or crosswind conditions.

**Note 2:** Prior to take-off, in the interest of better cockpit-coordination, the candidate will be expected to complete a crew briefing with the examiner on the intended departure procedure, take-off considerations and procedures to be used in the event of an actual engine failure during take-off and initial climb.

### *Performance Criteria*

Assessment will be based on the candidate's ability to:

- (a) complete appropriate checks;
- (b) position the flight controls and configure the aircraft for the existing conditions;
- (c) check the canopy to ensure that all end cells are fully inflated and in condition for take-off (powered parachute candidates only);
- (d) check for traffic, taxi into the take-off position, and align the aircraft along the runway centreline or the centre of the selected take-off path;
- (e) advance the throttle smoothly to take-off power;
- (f) confirm that take-off power has been achieved;
- (g) rotate at recommended airspeed;
- (h) accelerate to and maintain recommended climb speed (+10/-0 mph); and
- (i) maintain take-off power to a safe height, then, where applicable, set climb power.

## **8. STALL**

### ***Aim***

To determine that the candidate can recognize the indications of an approach to a stall and can accomplish a positive and smooth recovery with minimum loss of altitude.

### ***Description***

The candidate will be required, at an operationally safe altitude that allows recovery at or above 2000 feet AGL or the minimum height recommended by the manufacturer, whichever is higher, to enter the approach to a stall manoeuvre from a reduced power situation. The examiner will specify the aircraft configuration for the approach to stall demonstration.

### ***Performance Criteria***

Assessment will be based on the candidate's ability to:

- (a) complete appropriate safety precautions before entering a stall;
- (b) establish the specified configuration;
- (c) transition smoothly to a pitch attitude that will induce a stall;
- (d) maintain directional control;
- (e) promptly and smoothly recover using control application in the proper sequence;  
and
- (f) avoid secondary stall, excessive airspeed, or excessive altitude loss.



## **9. PILOT NAVIGATION**

### ***Aim***

To determine that the candidate can use an aeronautical chart to effectively navigate from one place to another.

### ***Description***

When requested by the examiner, the candidate will be expected to demonstrate the ability to navigate from a known position to a position assigned by the examiner. This is an assessment of ability to navigate using pilotage (map reading) and available geographic features such as roads, railways and rivers. No planning before the flight test will be done for this exercise.

The exercise will be continued at least until the stage where the aircraft is established on the proposed track or is following a suitable geographic feature in a manner that will ensure that arrival at the destination is predictable.

### ***Performance Criteria***

Assessment will be based on the candidate's ability to:

- (a) identify landmarks by relating surface features to chart symbols;
- (b) establish the aircraft on a track or follow a geographic feature that will lead to the assigned destination;
- (c) provide an estimated time of arrival that is sufficiently accurate to ensure that the exercise can be conducted as planned; and
- (d) maintain the selected altitude ( $\pm 200$  feet).

## **10. PRECAUTIONARY LANDING**

### ***Aim***

To determine that the candidate can carry out the procedure for evaluating an unfamiliar airstrip or a landing area where the suitability of the landing surface is unknown.

### ***Description***

The examiner will assign a potential landing area. The candidate will be required to determine whether or not the site would be suitable for a landing, using an organized procedure to assess factors such as obstacles, softness or hardness of the surface, slope, roughness, length, width, wind direction or other factors affecting a landing.

### ***Performance Criteria***

Assessment will be based on the candidate's ability to:

- (a) establish circuits at an appropriate distance from the runway or airstrip;
- (b) overfly the landing area in stabilized flight that will permit an effective assessment of surface conditions and maintain a safe obstacle clearance altitude;
- (c) maintain appropriate altitude, heading and airspeed;
- (d) select the most suitable touchdown zone considering wind conditions, landing surface and obstructions;
- (e) indicate the type of landing to be used;
- (f) prepare the passenger for landing; and
- (g) complete appropriate checks.

## 11. FORCED LANDING

### *Aim*

To determine that the candidate can, in event of an engine failure, select a suitable landing area and fly a successful approach.

### *Description*

Engine failure will be simulated without advance warning by the examiner. The candidate will be expected to select a suitable area, use an organized procedure, fly a successful approach to that landing area and accomplish the required emergency procedures. The overshoot will be carried out when requested by the examiner at an operationally safe altitude.

### *Performance Criteria*

Assessment will be based on the candidate's ability to:

- (a) initiate the approach at the best glide airspeed (+10/-0 mph);
- (b) select a suitable landing area;
- (c) plan the approach, considering aircraft altitude, wind conditions, terrain, obstructions, and other factors;
- (d) select a touchdown zone;
- (e) vary airspeed, descent, and flight profile, as necessary, to safely achieve a successful approach to the selected touchdown zone;
- (f) attempt to determine the cause of the simulated malfunction;
- (g) prepare the passenger for landing;
- (h) complete appropriate checks; and
- (i) prepare for overshoot, if requested by the examiner.

**Note 1:** The candidate will be expected to demonstrate good airmanship by clearing the engine at appropriate intervals during the descent. Where the aircraft is equipped with flaps, the practice of leaving some power on and achieving a normal descent angle and airspeed by using flaps is acceptable.

**Note 2:** A change in landing site is acceptable from an altitude or point in the approach where a landing could still be made on the original landing area.

## **12. OVERSHOOT**

### ***Aim***

To determine that the candidate can use the correct procedures to execute a safe overshoot.

### ***Description***

The examiner may request the overshoot from the landing approach, the forced landing or elsewhere during the test. The candidate will be required to use aircraft configuration, procedures and airspeeds specified in the operating manual.

### ***Performance Criteria***

Assessment will be based on the candidate's ability to conduct an overshoot in accordance with the procedures specified in the operating manual. In no procedure is specified, the candidate will:

- (a) promptly and smoothly apply maximum allowable power;
- (b) use carburetor heat, as applicable;
- (c) establish a positive rate of climb;
- (d) control direction and airspeed (+10/-0 mph); and
- (e) complete the appropriate checks.

### **13. EMERGENCY PROCEDURES**

#### ***Aim***

To determine that the candidate can react promptly and correctly to emergencies.

#### ***Description***

The examiner will specify an emergency situation. The candidate will be required to describe or demonstrate the appropriate procedures to respond to the emergency. Assessment may be carried out during any portion of the flight test.

#### ***Performance Criteria***

Assessment will be based on the candidate's ability to analyze the situation, take appropriate action and follow appropriate memory items, emergency checklists or procedures, for any one (1) of the following simulated emergencies, as specified by the examiner:

- (a) partial power loss;
- (b) rough engine operation or overheat;
- (c) loss of oil pressure;
- (d) fuel starvation;
- (e) electrical fire;
- (f) vacuum system failure;
- (g) pitot or static blockage;
- (h) cabin fire;
- (i) icing;
- (j) electrical failures;
- (k) flap failure;
- (l) brake failure or seizure;
- (m) door opening in flight;
- (n) emergency descent;
- (o) dig, bounce, submerging float, porpoising (seaplane candidates only); or
- (p) any other emergency particular to the aircraft.

## **14. THE CIRCUIT**

### ***Aim***

To determine that the candidate can operate the aircraft in a safe manner in the vicinity of an aerodrome.

### ***Description***

The candidate will be required to demonstrate correct circuit procedures at any of the aerodromes where the test is conducted, while maintaining separation from other aircraft.

### ***Performance Criteria***

Assessment will be based on the candidate's ability to:

- (a) fly an accurate circuit maintaining correct position and separation from other aircraft;
- (b) comply with published circuit entry and departure procedures;
- (c) comply with published and established traffic patterns;
- (d) correct for wind drift to maintain proper ground track;
- (e) remain oriented with the runway/landing area in use;
- (f) maintain circuit altitude ( $\pm 100$  feet) and an appropriate airspeed; and
- (g) complete appropriate checklists.

## 15. APPROACH AND LANDING

### *Aim*

To determine that the candidate can approach and land safely using the correct procedure and technique for the actual wind conditions, runway surface and length (or those specified by the examiner) and to assess the possibility of such further conditions such as wake turbulence.

### *Description*

The candidate will be required to demonstrate a landing appropriate to the conditions that exist, or those specified by the examiner. When the examiner specifies simulated conditions such as surface conditions, obstacles on approach, runway threshold or length of surface available to the candidate, they will be clearly specified prior to commencing the exercise.

Assessment of approaches and landings will be based on the candidate's ability to select the proper approach profile for the actual or simulated conditions.

Seaplane candidates will be expected to demonstrate a glassy water approach and landing if real glassy water conditions are readily available in proximity to the landing site.

**Note:** The candidate will be required to explain the necessity for any variation from recommended airspeeds, i.e. gusty or crosswind conditions.

### *Performance Criteria*

Assessment will be based on the candidate's ability to:

- (a) use procedures appropriate to the wind conditions, landing surface and obstructions;
- (b) establish the recommended approach and landing configuration;
- (c) maintain a stabilized approach at the recommended airspeed (+10/-0 mph);
- (d) maintain crosswind correction and directional control throughout the approach and landing;
- (e) make smooth, timely, and correct control applications during the approach and landing;
- (f) touch down smoothly at a minimum safe speed for existing conditions, within the specified touch-down zone;
- (g) touch down with no drift and with the longitudinal axis of the aircraft aligned with and over the runway centreline or the centre of the selected landing path;
- (h) apply brakes as necessary, without locking the wheels; and
- (i) complete appropriate checks.

**16. SLIPPING (NOT A FLIGHT TEST ITEM FOR POWERED PARACHUTE, WEIGHT SHIFT OR TWO AXIS CONTROL CANDIDATES)**

***Aim***

To determine that the candidate can conduct a slipping manoeuvre safely and effectively to lose altitude.

***Description***

The examiner will request a slipping manoeuvre during the landing approach, the precautionary approach or the forced landing approach.

The candidate will be required to demonstrate either a:

- (a) forward slip;
- (b) sideslip; or
- (c) slipping turn.

***Performance Criteria***

Assessment will be based on the candidate's ability to:

- (a) smoothly establish an effective slip;
- (b) maintain a slip appropriate to the flight profile and crosswind conditions, where they exist;
- (c) in the case of a forward slip, maintain the intended flight path;
- (d) recover smoothly to coordinated flight.

**Note:** Any significant skidding manoeuvre is unacceptable.



Recommendation for Flight Test — Ultra-light Aeroplane  
 Recommandation au test en vol — Avion ultra-léger

Name of Candidate (print) Nom du candidat (en lettres moulées)	Permit Number N° de permis
Flight Experience Expérience du vol Dual — Double commande                      Solo	Flight Training Unit ID Number N° unité de formation au pilotage

I, the undersigned instructor:

certify that the above named candidate meets the minimum experience requirements to be admitted to the flight test,

certify that I have personally conducted a pre-test evaluation of all required flight test items with the candidate,

consider the candidate to have reached a sufficient level of competency to complete the ultra-light flight test and hereby recommend the candidate for the flight test, and

certify that I am qualified through the privileges of my pilot permit or licence to make this recommendation.

Je, soussigné, instructeur agréé,

déclare que le candidat respecte les exigences minimales d'expérience pour pouvoir être admis au test en vol.

De plus, je déclare avoir personnellement effectué avec le candidat une évaluation pré-test en vol de tous les éléments du test.

Je considère que le candidat a atteint un niveau de compétence suffisant pour réussir au test en vol sur avion ultra-léger, et je recommande donc le candidat au test en vol.

Je certifie également que les avantages de ma licence de pilote m'autorisent à faire cette recommandation.

Name of Instructor Recommending Test (print) Nom de l'instructeur qui recommande le test (en lettres moulées)	Permit/Licence Number N° de permis/licence
Signature  Date (yyyy-mm-dd) Date (aaaa-mm-jj)	Flight Training Unit Unité de formation au pilotage

Recommendation for Partial Flight Test — Ultra-light Aeroplane  
 Recommandation au test en vol partiel — Avion ultra-léger

Name of Candidate (print) Nom du candidat (en lettres moullées)	Licence/Permit Number N° de licence/permis
Flight Experience Expérience du vol Dual — Double commande                      Solo	Flight Training Unit ID Number N° unité de formation au pilotage

I have conducted a review of the flight test item(s)

J'ai procédé à une révision du ou des éléments de test suivants

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and have completed additional training with this candidate.

et j'ai donné une formation complémentaire au candidat.

I consider the candidate to have reached a sufficient level of competency to successfully complete the ultra-light aeroplane flight test and hereby recommend the candidate for the partial flight test.

Je considère que le candidat a atteint un niveau de compétence suffisant pour réussir au test en vol sur avion ultra-léger, et je recommande donc le candidat au test en vol partiel.

I certify that I am qualified through the privileges of my pilot permit or licence to make this recommendation.

Je certifie également que les avantages de ma licence de pilote m'autorisent à faire cette recommandation.

Name of Instructor Recommending Test (print) Nom de l'instructeur qui recommande le test (en lettres moullées)	Permit/Licence Number N° de permis/licence
Signature  Date (yyyy-mm-dd) Date (aaaa-mm-jj)	Flight Training Unit Unité de formation au pilotage