



Welcome to DroneZUp

Flight Test

INTRODUCTION

The practical flight test is designed to assess a pilot's ability to operate an aircraft in a safe and competent manner. Test manoeuvres are designed to test control coordination and replicate specific tasks necessary for safe operation of the aircraft.

NB: If the aircraft can operate in a flight mode that does not use positioning assistance this will also be evaluated to test if the pilot can operate the aircraft in the event of a GNSS positioning failure.

A written course examination must be completed successfully prior to the flight test. Questions may also be asked orally prior to, and during the flight test. Answers will be assessed by the examiner and if any answers demonstrate incorrect understanding of the relevant rule(s), the examiner will discuss the answers with the candidate. This process helps ensure that the candidate continues to maintain an accurate knowledge and on-going application of the rules.

BRIEFING

The Assessment will start with a safety briefing. This will be by means of a two way discussion between the pilot and assessor and will include:

- Basic rules/methodology for carrying out the assessment (Assessor)
- The weather and how your aircraft will perform in it (pilot).
- Basic discussion of applicable CAR 101 Rules – (Pilot and Assessor), e.g. airspace, suitability of landing area, line of sight requirement, ability to observe the surrounding airspace, shielded or not etc.
- Identification of local hazards, and any mitigation that will be carried out (Pilot and Assessor)
- Discussion of the aircraft and its systems, including any limitations (Pilot)
- Verification of battery condition – sufficient for a 10 minute test flight (Pilot)
- Discussion and verification of the current RTH setting and its suitability for the current site (pilot)
- Pre-flight mechanical check of the aircraft (pilot)

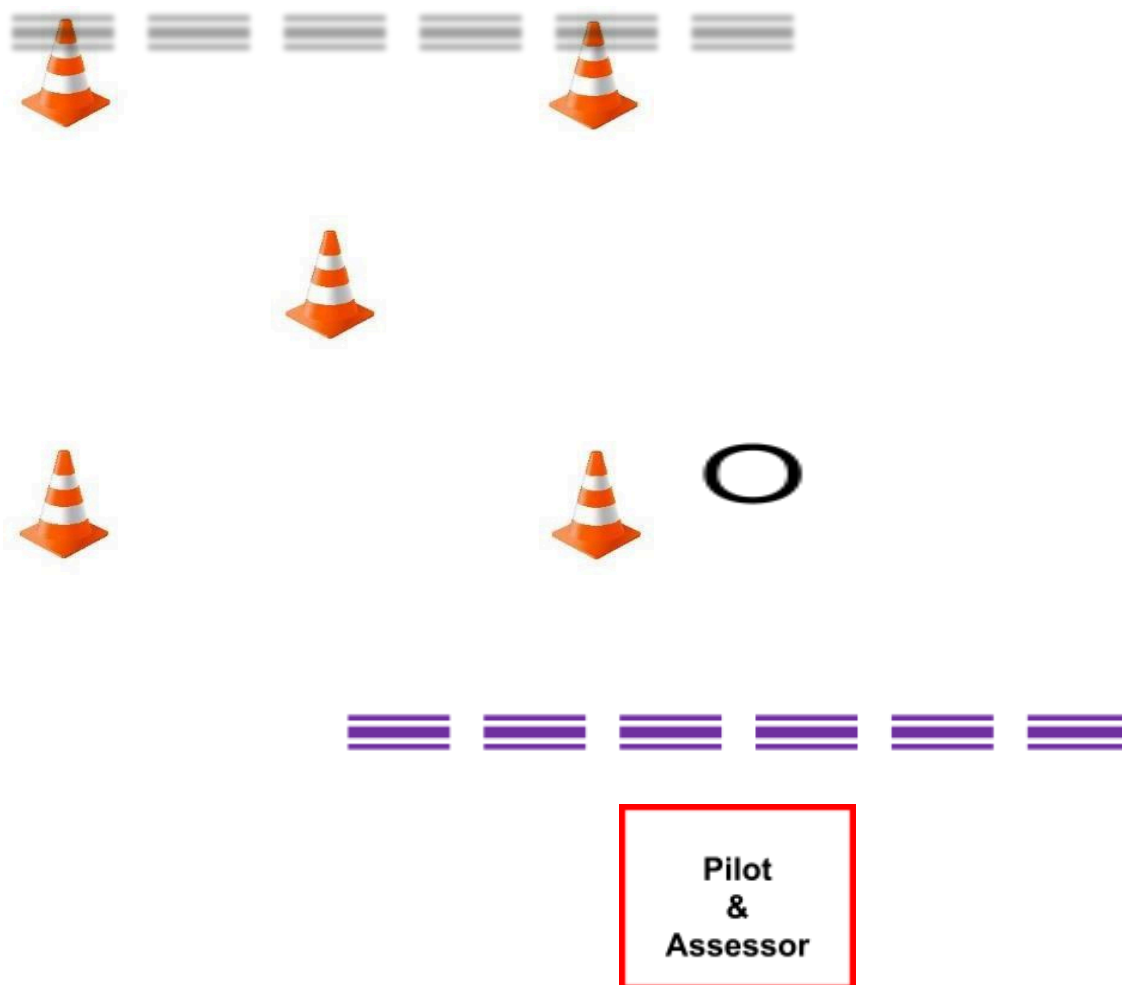
If the weather conditions are not suitable for the test flight to be conducted fairly and/or safely, the flight test will be delayed or postponed until a later agreed date/time.

Breaching 101 rules at any time will result in failure of the flight test

ASSESSMENT COURSE

The assessment is carried out over a small course laid out with five cones in an “X” shape, approximately 10m – 12m square. A take-off/landing area is designated and an imaginary hard-line separates the course from the Pilot and Examiner. If any third party attendees are present and observing, they are to remain behind the pilot and assessor

The aircraft should never cross the line between the course and pilot/assessor during the flight test. Breaching this rule will result in failure of the OCA.



During the flight test, the assessor will direct the pilot to fly the aircraft to specific cones in differing sequences while conducting a range of manoeuvres. Instruction will also include different orientations and elevations of the aircraft as required.

Competence is demonstrated by positioning the drone as directed and carrying out the assessment tasks in a confident, calm and controlled manner.

ASSESSMENT TASKS

The following tasks may be carried out in any order, and possibly in repetition to ensure the pilot has met the required standard.

Do not worry about the wind. In windy conditions, the assessor won't evaluate how accurately you fly in the wind, but rather how you react to it.

Above all else – Relax.

TAKE OFF, SYSTEMS TEST & LANDING

Before arming the aircraft, announce your intention to arm, by calling out 'Arming', 'Starting' or some other similar warning.

Take off vertically in a smooth controlled fashion and establish a stable hover at approximately 2m altitude. The aircraft should not drag the undercarriage on the ground, or move about wildly during the ascent or hover

Verify that the aircraft and controller are functioning correctly and then land.

Landing should be smooth, vertical, and deliberate. Accuracy during landing is a sign of familiarity with the aircraft.

360 YAW ON THE SPOT

Without GNSS positioning, this task is one of the more difficult of the assessment and it is very useful for displaying any aircraft orientation control issues.

Establish a stable hover over the centre cone.

Yaw the aircraft 360 degrees, in either direction, taking approximately 6 seconds to complete the rotation.

While yawing, maintain the aircraft's position above the cone.

Repeat in the opposite direction.

The rate of rotation in yaw should be constant - speeding up the rate of rotation in a specific orientation displays a lack of competence in flying in that orientation. The Assessor will note which orientations the candidate appears to struggle in and may request the same orientations for future tasks.

FOUR QUARTERS OF ORIENTATION

This task will display the candidate's ability to control the aircraft accurately in all orientations.

The Assessor will request the Pilot to position the aircraft over one of the 4 outside cones of the "X" and to then fly to the next cone in various orientations.

Repeat in various sequences and orientations as instructed.

FLYING THE DIAGONALS

This task will display the candidate's ability to control the aircraft accurately with simultaneous inputs on both controls.

The Assessor will request the Pilot to position the aircraft over one of the 4 outside cones of the "X" and to then fly diagonally through the centre to the opposite cone while maintaining a constant orientation.

Repeat forwards and backwards on both diagonals.

VERTICAL SPIRAL

This task will display the candidate's ability to control the aircraft accurately and smoothly with simultaneous inputs on both controls – rate of climb/descent and rotation while maintaining position.

The Assessor will request the Pilot to position the aircraft over the centre cone of the "X" and to then climb vertically while rotating the aircraft 360 degrees. Position should be maintained over the cone during the manoeuvre.

The Assessor will then request the Pilot to descend while rotating the aircraft 360 degrees in the opposite direction. The manoeuvre should conclude with the aircraft at the starting altitude and orientation above the centre cone.

ASCENDING AND DESCENDING CIRCUITS

This is the same as the previous task but with forward movement included. This task requires the pilot to use both control sticks in a smooth manner, whilst maintaining a steady altitude change throughout.

The Assessor will request the aircraft to be positioned at a cone, in an orientation, and at an altitude.

The aircraft will be flown in a LH or RH circuit around the outside cones with nose in the direction of flight, and turning at each part of the box. Forward progress should be constant with no stopping at any cone while climbing/descending should be smooth/constant to the requested altitude.

Once at the 4th cone (directly above the start point), maintain a steady hover and rotate 180 degrees in yaw.

Fly the opposite direction circuit whilst descending in the same manner back to the start point.

FIGURE 8S

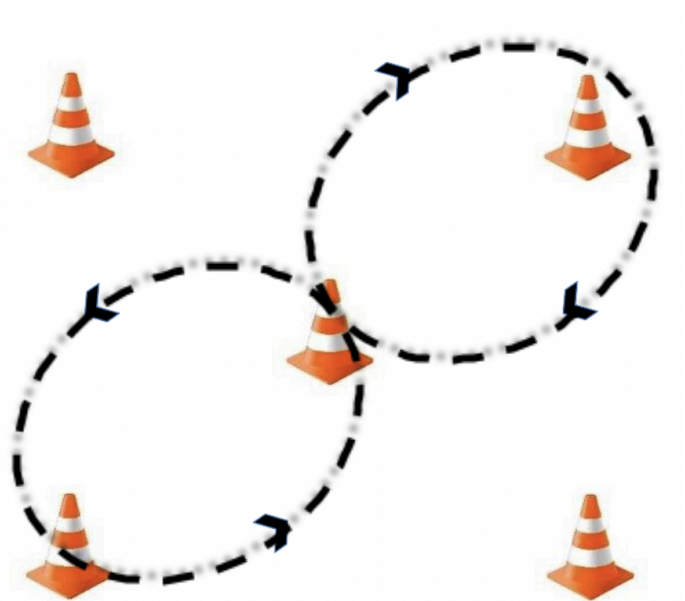
This task is designed to show the pilots competence in flying in multiple orientations in forward flight, while executing coordinated turns. Wind direction will need to be considered to keep both turns equal in diameter.

Position the aircraft over the centre Cone. Pick any 2 of the 5 cones, informing the instructor of which ones you have chosen.

Fly a close figure 8 around the cones keeping the nose of the aircraft in the direction of flight, at a constant altitude and crossing the centre cone of each circuit. The turns around each cone should be smooth with bank and yaw coordinated around the turn.

The crossover point of the figure 8 should be at the same point (centre cone), in the middle of the 2 cones.

Repeat in the opposite direction.



EMERGENCY SITUATIONS

At any time during the flight test, the assessor could request the simulation of an emergency. This might involve:

- Manned aircraft Incursion
- Unexpected public incursion into the area
- Low battery warning
- Loss of sight of aircraft

CONCLUSION

The assessor will advise the conclusion of the flight test at which point the pilot will return the aircraft to above the lift off area, land the aircraft and switch off the aircraft and controller.

The assessor will discuss the flight test and any comments with the pilot after which the pilot will sign the and date the Flight Test record sheet.