

# ANNUAL INSPECTION – SMALL AIRCRAFT

ref: CARs 625 Appx B & C

Aircraft: \_\_\_\_\_

Date: \_\_\_\_\_

Hours: \_\_\_\_\_

## APPENDIX B (2007/12/30)

### (1) Aircraft Generally

- (a) Remove or open all necessary inspection plates, access doors, fairings and cowlings. Thoroughly clean the aircraft and engine.
- (b) Inspect panel, door and cowling closing and locking mechanisms for improper installation and function.
- (c) Lubricate in accordance with the manufacturer's recommendations.

### (2) Fuselage and Hull Group

- (a) Structure - inspect for deterioration, distortion, evidence of failure and defective or insecure attachment of fittings.
- (b) Systems and components - inspect for improper installation, apparent defects and unsatisfactory operation.

### (3) Cabin and Cockpit Group

- (a) Generally - inspect for dirt and loose equipment that might foul the controls;
- (b) Seats and safety belts - inspect for poor condition, fraying, and any other apparent defects;
- (c) Windows and windshields - inspect for deterioration and breakage;
- (d) Instruments - inspect for poor condition, mounting, marking and, where practicable, for improper operation;
- (e) Flight and engine controls - inspect for improper installation and improper operation;
- (f) Batteries - inspect for improper installation and improper charge;
- (g) All systems - inspect for improper installation, poor general condition, apparent and obvious defects and insecurity of attachment.
- (h) Placards - inspect for missing and illegible mandatory placards.  
(amended 2002/06/01; no previous version)

### (4) Engine and Nacelle Group

- (a) Leaks - inspect for oil, fuel or hydraulic leaks;
- (b) Studs and nuts - inspect for defects, evidence of improper torque and safety locking;
- (c) Cylinder compression - check; if compression test indicates problems, check internal condition and tolerances;
- (d) Screens and sump drain plugs - check for metal particles or foreign matter;
- (e) Engine mounts - inspect for cracks, looseness of mounting and looseness of engine to mount;
- (f) Flexible vibration dampeners - inspect for poor condition and deterioration;
- (g) Engine controls - inspect for defects, improper travel and improper safety locking;
- (h) Lines, hoses and clamps - inspect for leaks, improper condition and looseness;
- (i) Exhaust stacks - inspect for cracks, defects and improper attachment;
- (j) Accessories - inspect for apparent defects in security of mounting;
- (k) All systems - inspect for improper installation, poor general condition, defects and insecure attachment;
- (l) Cowlings - inspect for cracks and other defects.
- (m) Internal corrosion - inspect engines which have not been inhibited and have been out of service in excess of 12 months.
- (n) Engine performance - during the ground run, run the engine in accordance with the manufacturer's recommendation to determine satisfactory performance of the following:
  - (i) idle and maximum RPM;
  - (ii) magneto RPM drop;
  - (iii) fuel and oil pressures;
  - (iv) cylinder and oil temperatures.
- (o) Engines maintained to an On-condition program - check reference RPM.

## (5) Landing Gear Group

- (a) All units - inspect for condition and security of attachment;
- (b) Shock absorbing devices - check oleo fluid level;
- (c) Linkage, trusses and members - inspect for undue or excessive wear, fatigue and distortion;
- (d) Retracting and locking mechanism - inspect for improper operation;
- (e) Hydraulic lines - inspect for leakage;
- (f) Electrical system - inspect for chafing and improper operation of switches;
- (g) Wheels - inspect for cracks, defects and condition of bearings;
- (h) Tires - inspect for wear, cuts and incorrect inflation; inspect for improper installation and improper operation.
- (i) Brakes - inspect for improper adjustment;
- (j) Floats and skis - inspect for insecure attachment and apparent defects;

## (6) Wing and Centre Section Assembly

Inspect structure for general condition, deterioration, distortion, evidence of failure and insecurity of attachment.

## (7) Empennage Assembly

Inspect structure for general condition, deterioration, distortion, evidence of failure, insecure attachment, improper component installation and improper component operation.

## (8) Propeller Group

- (a) Propeller hub assembly - inspect for cracks, nicks, binding and oil leakage;  
(amended 2000/12/01)
- (b) Bolts and nuts - inspect for improper torque and safety locking;  
(amended 2000/12/01)
- (c) Anti-icing devices - inspect for improper operation and defects, paying particular attention to:  
(amended 2000/12/01)
  - (i) deicer boots for cuts, gouges and adherence;
  - (ii) slip ring for excessive wear and gouges; and
  - (iii) connections and harness for tightness.
- (d) Control mechanisms - inspect for improper operation, insecure mounting and improper range of travel;
- (e) Metal blades - inspect for  
(amended 2007/12/30)
  - (i) cracks, nicks, external corrosion, dents, scratches, bends, erosion and loss of protective finish,  
(amended 2007/12/30)
  - (ii) evidence of lightning or object strike, and  
(amended 2000/12/01; no previous version)
  - (iii) correct track, excessive rotational and end play;  
(amended 2000/12/01; no previous version)
- (f) Wooden and composite blades – inspect for:  
(amended 2007/12/30)
  - (i) cracks, bruises, scars, warping, evidence of glue failure and delamination,  
(amended 2007/12/30; no previous version)
  - (ii) correct track, excessive rotational and end play, and  
(amended 2007/12/30; no previous version)
  - (iii) attachment bolt tightness;  
(amended 2007/12/30; no previous version)
- (g) Spinner assembly - inspect for cracks and wear;  
(amended 2007/12/30)
- (h) Variable pitch propellers - check correct operation during ground run.  
(amended 2007/12/30; no previous version)

### Information note:

(amended 2007/12/30; no previous version)

- (i) While not specifically required by this schedule, a check of the propeller's dynamic balance at the annual inspection is strongly recommended. Vibration due to imbalance can be hard to detect without instruments, but may nevertheless be causing problems throughout the aircraft, including to the propeller itself. With proper equipment, dynamic imbalance is simple both to detect and to correct.  
(amended 2007/12/30; no previous version)

- (ii) Propeller condition is greatly affected by environmental conditions. Ideally, the aircraft should be parked in a clean, dry location. If it is to be out of use and parked out of doors for an extended period, it is worthwhile removing the propeller and storing it inside. Failing this, the use of a propeller cover, or simply turning the blades of a twin bladed variable pitch propeller to the horizontal position, will reduce the ingress of moisture to the blade bearings and extend their potential life. Other simple actions that can extend the life of the propeller include regular cleaning, the application of wax polish, and the use of protective tape on the leading edges. (If tape is used, care should be taken not to apply it where it could be ingested into the engine if it becomes detached.)  
(amended 2007/12/30; no previous version)

#### **(9) Radio Group**

- (a) Radio and electronic equipment - inspect for improper installation and insecure mounting.
- (b) Emergency Locator Transmitters - test performance in accordance with the procedure specified in [Appendix G](#) of Chapter 571 of the Airworthiness Manual .
- (c) Wiring and conduits - inspect for improper routing, insecure mounting and apparent defects.
- (d) Bonding and shielding - inspect for improper installation and poor condition.
- (e) Antennas, including trailing antennas - inspect for poor condition, insecure mounting and improper operation.

#### **(10) Miscellaneous Items Not Otherwise Covered by this Listing**

##### **(11) Aircraft Generally, Including Technical Records**

- (a) Enter details of all deficiencies found during the inspection in the aircraft technical records.
- (b) Upon completion of the inspection, replace or close all inspection plates, access doors, spinners, fairings and cowlings.  
(amended 2000/12/01)

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## APPENDIX C (2019/08/01) – ELT changes

### Out of Phase Task Listings

Carry out the following tasks at the times indicated:

#### 1. All Aircraft

Ensure that any applicable equipment maintenance task required by this appendix is performed at, or before, the next inspection interval listed therein.

#### 2. Aircraft Used in Dual Role Operations

Upon conversion between roles, inspect to ensure that contamination, structural damage and other defects incurred during operation in the special purpose role, are rectified prior to operation in the normal role.

#### 3. Rotorcraft Dynamic Components

At the intervals recommended by the aircraft manufacturer, inspect, overhaul or test:  
(amended 1999/09/01)

- (a) the drive shafts or similar systems;
- (b) the main rotor transmission gearboxes;
- (c) the main rotors and hubs; and  
(amended 1999/09/01)
- (d) the tail rotor.

#### 4. Propellers General

(amended 2007/12/30)

For the purposes of this appendix, the following definitions apply:  
(amended 2007/12/30; no previous version)

"double acting propeller" - A variable pitch propeller, the blade angles of which can be varied in either direction (increase or decrease) by direct control input from the pilot, or from an automatic mechanism, includes those propellers such as the "Hydromatic" models, in which governor oil pressure is opposed by engine oil pressure.  
(amended 2007/12/30; no previous version)

"fixed pitch propeller" - A propeller, the blade angles of which cannot be altered in service.  
(amended 2007/12/30; no previous version)

"ground adjustable propeller" - A propeller, the blade angles of which cannot be varied in flight, but are capable of being adjusted on the ground.  
(amended 2007/12/30; no previous version)

"single acting propeller" - A variable pitch propeller, the blade angles of which can be varied by the application of control input in one direction only (either increase or decrease), the opposing force being provided by counterweights, springs, or air pressure.  
(amended 2007/12/30; no previous version)

"variable pitch (VP) propeller" - A propeller, the blade angles of which can be varied in flight, either by direct selection, or by the action of an automatic mechanism.  
(amended 2007/12/30; no previous version)

## 5. Variable Pitch Propellers

(amended 2007/12/30)

Except for aircraft that are operated under a special certificate of airworthiness in the owner-maintenance or amateur-built classification, all variable pitch propellers shall be overhauled at the following intervals:

(amended 2007/12/30; no previous version)

- (a) Where the manufacturer has made recommendations regarding the air time between overhauls, overhaul at the interval recommended or every ten years, whichever comes first;  
(amended 2000/12/01)
- (b) Where the manufacturer has not made any recommendations regarding TBO, the propeller(s) shall be overhauled at the following intervals:  
(amended 2000/12/01)
  - (i) in the case of propellers installed on turbine engines: 2,000 hours air time or ten years, whichever comes first;  
(amended 2000/12/01)
  - (ii) in the case of double acting propellers installed on piston engines: 2,000 hours air time or ten years, whichever comes first, or;  
(amended 2000/12/01)
  - (iii) in the case of single acting propellers installed on piston engines: 1,500 hours air time or ten years, whichever comes first.  
(amended 2000/12/01)

### Information note:

The ten year overhaul intervals mentioned in (a) and (b), start either from its initial date of installation following manufacture, from its last five year corrosion inspection or its last overhaul, whichever occurred last.  
(amended 2000/12/01)

## 6. Fixed Pitch and Ground Adjustable Propellers

- (a) Fixed pitch wooden propellers shall be checked for tightness after the first 25 hours of air time following their installation and at each subsequent inspection.  
(amended 2007/12/30; no previous version)
- (b) At intervals of not more than 5 years, the propeller shall be removed from the aircraft and inspected for corrosion or other defects over its entire surface, including the hub faces and the mounting hole bores. While the propeller is removed, it shall also be checked for correct dimensions. However, if defects which require repairs beyond those recommended as field repairs by the propeller manufacturer are found, the propeller shall be repaired by an organization approved for the overhaul of propellers.  
(amended 2007/12/30)

### Information note:

(amended 1998/09/01; no previous version)

The dimensional check requirement does not include a check on blade twist. The dimensional check refers to changes in blade dimension resulting from repairs, particularly cropping of the tips. It is intended to ensure that the blade diameter remains within service limits.

## 7. Engines

All piston and turbine engines installed in aeroplanes and helicopters operated pursuant to CAR [406](#), in large aircraft operated pursuant to CAR [604](#), and in aircraft operated pursuant to Part VII, shall be overhauled at the intervals recommended by the engine manufacturer, or in accordance with an alternative hard time interval or an engine on-condition maintenance program approved in accordance with [Appendix D](#).

### Information note:

No hard time, including calendar time, between overhauls need be observed in the case of small aircraft reciprocating engines in non-commercial private operation.

## 8. Tachometers

The accuracy of mechanical drag cup type tachometers, for fixed wing propeller driven aircraft, shall be checked on site annually, and be accurate to within the tolerances established by the aircraft manufacturer or, where no tolerance has been specified by the aircraft manufacturer, to within  $\pm 4\%$  of engine RPM at mid-point of the cruise range.  
(amended 2000/12/01)

## 9. Weight and Balance

Except as provided for in an approved fleet empty weight and balance control program, all large aircraft shall be reweighed and an updated report prepared every five years.

## 10. Non-stabilized Magnetic Direction Indicators (MDIs)

- (a) Except as provided in (b) and (c), non-stabilized magnetic direction indicators shall be calibrated, and a dated correction card installed for each indicator, at intervals not exceeding 12 months;
- (b) The annual calibration requirement of (a) does not apply to an aircraft operating under an air operator certificate, or to any large or turbine-powered pressurized aircraft, where:
  - (i) the aircraft is equipped with two independent stabilized magnetic direction indicators in addition to the non-stabilized direct reading magnetic direction indicator; and
  - (ii) a procedure for monitoring and recording the performance of the magnetic direction-indicators is detailed in the flight training unit's, or in the air operator's approved maintenance control manual approved pursuant to CAR [406](#) and CAR [706](#) respectively.
- (c) The calibration requirement of (a) can be postponed, for the purpose of flights commencing or terminating within the area of compass unreliability, as defined in the Designated Airspace Handbook (TP 1820), or any of a series of flights conducted within a period of seven consecutive days, where the series commences within the area of compass unreliability.

## 11. Survival and Emergency Equipment

Survival and emergency equipment shall be overhauled at the intervals recommended by the manufacturer.

## 12. Emergency Locator Transmitters (ELTs)

(effective 2019/08/01)

- (a) ELTs capable of transmitting on 121.5 MHz frequency:
  - (i) ELTs powered by non-water-activated batteries shall be maintained at intervals not exceeding 12 months in accordance with the applicable performance test requirements in Standard 571.
  - (ii) ELTs powered by water-activated batteries shall be maintained at intervals not exceeding five years in accordance with the applicable performance test requirements in Appendix G of Standard 571.
  - (iii) ELT batteries shall be maintained at the interval recommended by the ELT manufacturer and in accordance with the applicable standards of airworthiness in Appendix G of Standard 571.
- (b) ELTs capable of transmitting on 406 and 121.5 MHz frequencies:
  - (i) ELTs powered by non-water-activated batteries shall be maintained at intervals not exceeding:
    - (A) 12 months, in accordance with the applicable operational test requirement in Appendix G of Standard 571; and
    - (B) 24 months, in accordance with the applicable performance test requirement in Appendix G of Standard 571.
  - (ii) ELTs powered by water-activated batteries shall be maintained at intervals not exceeding five years in accordance with the applicable performance test required by Appendix G of Standard 571.
  - (iii) ELT batteries shall be maintained at the interval recommended by the ELT manufacturer and in accordance with the applicable standards of airworthiness in Appendix G of Standard 571.

## 13. Altimetry Devices

(amended 2007/12/30)

- (a) Altimeters and other Altimetry devices installed in aircraft operating under Instrument Flight Rules, or under visual flight rules in Class B and C Airspace or Class C and D Airspace that is designated as "Transponder Airspace" shall be calibrated at intervals not exceeding 24 months, to the parameters and tolerances outlined in Appendix B of [Standard 571](#), or to equivalent standards acceptable to the Minister. (amended 2007/12/30)
- (b) For the purpose of this section, the term "altimetry devices" includes any air data computer, or other barometric device, providing a flight crew station, or an auto pilot, or automatic pressure altitude reporting system, or altitude alerting system with altitude data derived from static pressure. (amended 2007/12/30)

## 14. Air Traffic Control (ATC) Transponders

ATC Transponders, including any associated altitude sensing reporting mechanisms, where installed, shall be tested every 24 months, in accordance with [Appendix F](#) of Chapter 571 of the Airworthiness Manual.

(amended 2000/12/01)