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|  | <b>REPUBLIC OF SOUTH AFRICA</b><br><br><b>CIVIL AVIATION AUTHORITY</b> | CAA<br>Private Bag x 08<br>Waterkloof<br>0145 |
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## GENERAL

### LEGISLATION MATTERS

Proposals have been received regarding the amendment of Document SA-CATS-GMR, read together with Part 43.02.2(b)(i) and (ii) of the Civil Aviation Regulations, 1997. The said proposals are set out below. Written representations in favour of or against the said proposals may be made in writing to the Acting Commissioner for Civil Aviation, to reach the Acting Commissioner by not later than **30 APRIL 2001**.

### SCHEDULE 1

#### 1.1 **PROPOSED ADDENDUM I TO APPENDIX I OF SA-CATS-GMR (TIME BETWEEN OVERHAULS AND LIFE LIMITED PARTS)**

#### **12 -YEAR INSPECTIONS OF TEXTRON LYCOMING AND TELEDYNE CONTINENTAL PISTON ENGINES**

*component sooner than the aforementioned 12-year overhaul limitation.*

#### **1. GENERAL**

*Aircraft fitted with Textron Lycoming and Teledyne Continental series engines and operating under any Part of the Civil Aviation Regulations, 1997, as amended, will have to comply with the following:*

- (a) *The past history of the engine must be available from the person/organisation that released the engine after overhaul. This history must be recorded in the engine logbook in use.*
- (b) *No fuel component fitted to an engine may exceed the 12-year overhaul limitation, or any other limitation imposed by a mandatory bulletin or airworthiness directive, which may require the component to be overhauled, reworked or having a modification performed to such a*

(c) *No engine shall exceed the recommended time between overhaul (TBO) hour limitation or long-term storage limitation imposed by its manufacturer.*

(d) *Engines in long-term storage will be dealt with on a case by case application. It will be the applicant's responsibility to show compliance with the requirements and to motivate the date at which he or she considers the calendar limitation to commence.*

#### **2. AIRCRAFT, OPERATED UNDER PARTS 127 OR 135, OR IN TERMS OF ANY AIR SERVICE LICENCE.**

(a) *All aircraft operated under the above mentioned Parts, and which have not been excluded, will have to show compliance with the requirements of paragraphs 1(a), 1(b), 1(c) and 1(d), as applicable.*

- (b) The provision of sub-paragraph 2(a) means, that should an aircraft owner or operator wish to operate his or her aircraft in any way that requires the operator or owner to be the holder of an air service licence or for which remuneration is received, **excluding agricultural aircraft**, such owner or operator will be required to have the engine overhauled or shock-loaded, as the case may be, on the expiry of 12-years. Under no circumstances may an engine exceed the engine hour TBO, or component hour limitation imposed by the manufacturer. The 12-year limit will commence after manufacture or re-manufacture, complete overhaul or shock load inspection of the engine in question, as the case may be.

### 3. AIRCRAFT OPERATED UNDER PART 91

- (a) An aircraft owner or operator wishing to operate his or her aircraft under Part 91 will be required to show compliance with the requirements of paragraphs 1(a), 1(b), 1(c) and paragraph 1(d) as applicable, except that:
- (b) The 12-year calendar life limitation imposed after manufacture or remanufacture, complete overhaul or shock-load inspection will not be applicable to engines, fitted to aircraft operated under Part 91, provided the owner or operator is in agreement with this procedure and authorises this, in writing to the SACAA, and the person responsible for performing the maintenance complies with the following after the engine reaches the 12 year limit:-
- (i) the engine must first be inspected for defects and a blow-by and boroscope inspection carried out on all cylinders. The blow-by's and boroscope inspection are to be within acceptable limits and certified as such in the applicable logbook;
  - (ii) all fuel and oil leaks must be investigated and rectified and, where necessary, seals or hoses requiring replacement are to be replaced;
  - (iii) ensure that the approved organisation responsible for extending the life on the engine

- has made the necessary entries in the engine logbook and attached all CRMA's relating to the overhaul of the components mentioned in paragraph 1(b) above are recorded in the applicable logbook;
- (iv) the organisation responsible for performing the maintenance must ensure that copies of all records of maintenance performed with respect to any overhaul, repair, replacement, adjustment or test of the aforementioned fuel components and engine are submitted to the SACAA on completion of all maintenance performed;
  - (v) the engine does not exceed any Airworthiness Directive or Mandatory Service Bulletin or Instruction;
  - (vi) the engine is inspected and found to be serviceable at each subsequent MPI and certified as such by an approved suitably rated person or organisation;
  - (vii) No engine may exceed the twelve year limitation mentioned in this addendum unless a written request as stated in paragraph 3(b) has been received from the owner or operator and this request is relayed to the South African Civil Aviation Authority for record purposes;
  - (viii) The aircraft is placarded in full view of the pilot in a permanent manner with the wording **NON-PUBLIC AIR TRANSPORT CATEGORY AIRCRAFT**.

### 4. AIRCRAFT OPERATED UNDER PART 137

Aircraft operated under Part 137 and fitted with a Continental or Lycoming piston engine shall be required to comply with the requirements of paragraph 1(a) and may not exceed the calendar or hour limitation imposed by the manufacturer. All requirements as laid down in all relevant bulletins shall be met in full. Due to the severe loads and stresses imposed on these engines during operation extensions cannot be considered.

**1.2 MOTIVATION**

*The UK CAA was approached for comment on the matter and it would appear that they are not implementing this requirement. They did however state that they would consider the matter at a later stage. Their Airworthiness Notice No. 35 dated 16 March 1993 refers.*

*Having no substantiation to recommend otherwise and due to our aging aircraft fleet this is not considered to be an acceptable practice in the interest of public safety. The Engineering Section is of the opinion that the requirement to overhaul aircraft engines operated in the*

*public transport category or flight training category should still apply. Aircraft operated under Part 91 should however be exempt from this requirement. This would be in line with the UK CAA ruling, provided that the conditions as laid down in the draft document to be known as Addendum 1 to Appendix 1 of the Civil Aviation Technical Standards (CATS) (General Maintenance Rules (GMR)) are complied with.*

**1.3 EXISTING PROVISION**

*No existing provision exists.*

## **SCHEDULE 2**

### **PROPOSED AMENDMENT OF PARAGRAPHS 2.4 (TELEDYNE CONTINENTAL MOTORS TCM) AND PARAGRAPH 2.8 (TEXTRON LYCOMING) IN APPENDIX I (TIME BETWEEN OVERHAULS AND LIFE LIMITED PARTS)**

#### **2.1.1 "2.4 TELEDYNE CONTINENTAL MOTORS (TCM)**

*All TCM engines must be overhauled at times indicated in the latest issue of Continental Service Bulletin No. M91-2 and Rolls Royce Service Bulletin No. T-421, subject to the provisions contained in Addendum I hereto."*

#### **2.1.2 "2.8 TEXTRON LYCOMING**

*Refer to the latest issue Lycoming Service Instruction No. 1009, subject to the provisions contained in Addendum I hereto."*

#### **2.2 MOTIVATION**

*To give effect to the proposal contained in Schedule I.*

#### **2.3 EXISTING PROVISIONS**

##### **2.3.1 "2.4 TELEDYNE CONTINENTAL MOTORS (TCM)**

*All TCM engines must be overhauled at times indicated in the latest issue of Continental Service Bulletin No. M91-2 and Rolls Royce Service Bulletin No. T-421."*

##### **2.3.2 "2.8 TEXTRON LYCOMING**

*Refer to the latest issue Lycoming Service Instruction No. 1009( )"*

### **ACTING COMMISSIONER FOR CIVIL AVIATION**