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AIRWORTHINESS

LEGISLATIVE MATTERS GUIDANCE DOCUMENT

Effective date: 31 July 2016



This RAC replaces RACA01/08 – LEGISLATIVE MATTERS, Dated 11 August 2016

CAR part 44.01.16(3) continued ‘on condition use’ and ‘on condition monitoring’ for NTCA, engines and components in the private use category

Section A: General Information

RAASA received numerous enquiries and requests from NTCA owners and technical approved persons for clarity to permit continued on condition use of NTCA and its components in the private use category. It would appear that owners and Approved Persons (AP) were informed by manufacturers that overhauls are compulsory on certain engines when they reach recommended time/date limitations.

RAASA then consulted with industry and technical approved persons on some basic guidelines which would ensure compliance with the existing regulation in Part 44.01.16(3).

The outcome of this consultation with industry led to the recommended guidelines as contained herein.

1. Background

Non type certified aircraft operated in terms of the private use category as provided for in Part 94, use engines that have not been certified for aviation use, or use engines that were previously certified for aviation use in other airframes and are now operated in experimental, amateur built, or NTCA production built airframes.

These aircraft are not certified. Their engines and components are therefore only required to be subject to the manufacturer’s recommended time and date limitations, if this is reflected in the aircrafts approved Maintenance Control Manual (MCM).

In the case where the owner builder or manufacturer wishes to deviate from the engine or component original manufacturer’s recommendations as provided for in Part 44, the owner or manufacturer shall amend the

MCM to reflect the alternate inspection, maintenance and overhaul schedules and submit this to the Director or body designated for acceptance.

Part 44.01.16(3) which states “where the manufacturer’s instruction or recommendation has not been complied with, such components or equipment must be overhauled as and when their condition shows that it is necessary to keep the aircraft serviceable”.

1. **Purpose**

However, this does not mean that there are no minimum standards or maintenance and safety requirements.

Herewith a guidance document to provide clarity with information, methods and procedures as a means of compliance with Part 24, 44 and 94, acceptable to the Director, or the body designated in terms of Part 149 as the case may be.

The regulation states that when an engine or a component’s ‘condition shows’ suggesting that a process of verifying the condition other than failure of such component. This process of verifying will require an inspection or series of inspections to verify serviceability for continued use and ‘on condition monitoring’.

In the case where an owner of an NTCA chooses not to undergo the series of inspections, they shall be required to comply with the MCM and the manufacturer’s instruction and recommendations as applicable.

The procedures have been clarified below.

2. **Applicability**

This guidance document applies to non-type certificated aircraft, engines and components listed in Part 24.01.1 (1) and (2) (a) to (i) and operated in the private use category in terms of Part 94.

Section B: Criteria for the continued on condition use of NTCA, engines and components.

1. In order to ensure continued airworthiness and promote the safety of an engine and engine components, manufacturers may make recommendations of when an aircraft engine has reached time or date limitations and are subject to specific maintenance or should be overhauled. However, as these recommendations are not always applicable or practical due to the unique operation of specific engines, Part 44 provides for alternative options. These options will allow the promotion of safety whilst not imposing undue and onerous compliance standards.
2. Owners of NTCA shall comply with Airworthiness Directives, Service Bulletins, Service Letters when declared mandatory by the Director or the Body designated for purpose in terms of Part 149. In order to ensure continued airworthiness of a component or an engine where such an engine or components are being used beyond the recommended time and date limits, the owner shall comply with the requirements in Regulation 44.01.16(3) and SA-CATS 44.01.16(3)(a).
3. This document provides guidance of inspections to determine the condition of engines in order for the Director or Designated body to consider such an application for the renewal of an ATF in the private

category, the following inspections shall be performed and reports thereof supplied to the Director or Designated body as applicable:

- Detailed maintenance records as contained in the maintenance logbook and in accordance with the aircrafts approved Maintenance Schedule, including record of regular oil changes & types of oil used and
- Report of a blow-by tests performed and
- Report of a borescope inspection performed of internal components and
- An report of the drained oil detailing a spectrographic analysis from a suitable oil analysis company such a Wear Check or similar, including an inspection and report of the magnetic plug and oil filter and
- An End-Play or Crank run out test report as applicable and
- An inspection of all, fuel parts and components including but not limited to those of carburettors, injectors, fuel pumps, fuel hoses, seals, O-rings and gaskets, fuel filters etc. In the case that such components are found to be unserviceable or worn they shall be serviced or replaced as appropriate and recorded in the AC maintenance logbook and
- An inspection of all parts and components such as water and oil pumps, filters, hoses, seals, gaskets O-rings and thermostats etc. In the case that such component are found to be unserviceable or worn they shall be serviced or replaced as appropriate and recorded in the AC maintenance logbook.
- Thereafter new oil and filter for base comparison on specified hours, as determined either;
 - every 25 hours or 6 months whichever occurs first, or
 - every 50 hours or 12 months, whichever occurs first
- Only a suitably rated Technical Approved Persons or AMOs may repair, replace, inspect and approve the above requirements.
- All requirements, tests, reports and inspections as listed above shall have been performed in the preceding 30 days of submission to the Director or Designated body as applicable.
- The Director or Designated body may require additional inspections or reports if deemed necessary for the approval and issue of an ATF in the private category.
- The owner of the aircraft shall include an addendum to the aircraft maintenance schedule that details an 'On Condition Monitoring' programme, for the aircraft its engine and components to determine and permit the continued on condition use and maintenance of the aircraft in the private operations category in terms of Part 24, 44 and 94 of the regulations.

Note: Where it is not possible to comply with a particular inspection listed above due to the nature of an engine or component as in the case of two stroke or automotive engines, the AMO or TAP shall comply with the aircrafts MCM, or provide details of what alternate methods where employed to inspect and determine to serviceability and airworthiness of the engine, component and aircraft.

This guidance document applies to non-type certificated aircraft, its engines and its components listed in Part 24.01.1 (1) and (2) (a) to (i) and operated in the private use category in terms of Part 94, as from the effective date.