Australian Government
Civil Aviation Safety Authority

AIRWORTHINESS BULLETIN

AWB 72-007 Issue 1 – 28 November 2017

PT6A Series Engines – TBO Pro-Rata Calculation

1. Effectivity

Pratt and Whitney Canada (P&WC) PT6A series engines maintained in accordance with the requirements of paragraph 1.3(b) of Airworthiness Directive AD/ENG/5 (*the **AD***), as in force from time to time.

Note: The words “as in force from time to time” refer to the most recent version of the referenced document.

2. Purpose

This Airworthiness Bulletin (AWB) addresses this Authorities policy for establishing the operating Time Between Overhaul (TBO) for the induction of part life engines onto the enhanced maintenance program prescribed in Appendix ‘A’ to the AD.

3. Background

The utilisation of the 5,000 hour engine TBO period defined in paragraph 1.3(b) of the AD is subject to compliance with the enhanced maintenance program requirements detailed in Appendix ‘A’ to the AD.

PT6A engines that have accumulated greater than 75% of the P&WC published TBO hours and have not previously been maintained in accordance with the intent of the Appendix ‘A’ maintenance requirements, shall be subject to a pro-rata TBO period based on the P&WC published TBO period.

4. Recommendations

The TBO threshold for an applicable part life PT6A engine is to be established using a pro-rata calculation based on the P&WC published TBO period for the specific engine model. The methodology used to calculate the individual TBO threshold is described in the following example;

- The basic industry TBO for a PT6A-114 model engine is 3,600 hours, (refer to the applicable P&WC Service Bulletin).
- The engine has a Time Since Overhaul (TSO) of 2,844 hours, (actual engine hours upon entering the program).
- 2,844 ÷ 3,600 = 79%, (calculated life used).
- 100% - 79% = 21%, (calculated life remaining).
- 21% of 5,000 hours, [AD/ENG/5, para. 1.3(b) TBO period] = 1,050 hours, (calculated hours remaining).

- The 1,050 hours is added to the 2,844 hours to give a final engine TBO of 3,894 hours, (Pro-rata engine TBO period).

Note: Once the 75% threshold has been exceeded, the time at which the engine shall be overhauled drops dramatically from 5,000 hours. In fact, once an engine with a P&WC published TBO of 3,600 hours goes over 2,700 hours (75%) the maximum an operator can get is 3,950 hours.

5. Enquiries

Enquiries with regard to the content of this Airworthiness Bulletin should be made via the direct link email address:

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