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November 28, 2018

Ms. Sue-M Matthews  
Manager, Continued Airworthiness  
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Your file Votre référence  
C6-3210-15  
Our file Notre référence  
5014-18  
RDIMS/ SGDDI  
No: 14736189  
PTS/ SSP  
No:20120062R1

Subject: **Alternative Means of Compliance (AMOC) to Transport Canada Airworthiness Directive (AD) CF-80-06 de Havilland DHC-6 Aeroplanes, No. AARDG 2018/A63**

- References:
1. E-mail message "DHC-6 MLG AMOC to introduce SB V6/0016 rev. A, in lieu of AD CF-80-06 (SB 6/380)" from V. Riley (Viking Air Ltd.) to J. Canal (Transport Canada) sent 9:03 AM February 7, 2014 (RDIMS 9191164)
  2. E-mail message "J3942-06, C6-3210-12, MLG, Global AMOC Request for AD CF-80-06" from M. Schade (Viking Air Ltd.) to R. McGowan (Transport Canada) sent 8:31 PM November 24, 2018 (RDIMS 14736177)
  3. de Havilland Service Bulletin 6/380 Revision C
  4. Viking Air Limited Service Bulletin V6/0016 Revision B

Dear Ms. Matthews,

This letter is a response to the reference 1 and 2 requests from Viking Air Limited (Viking). Both of those requests asked for an AMOC that would authorize the use of Viking Service Bulletin (SB) V6/0016 as the basis for inspection and overhaul of DHC-6 main landing gear (MLG) leg instead of SB 6/380 which is specified in TCCA AD CF-80-06.

In 1980, AD CF-80-06 was issued to mitigate risk of failure of the DHC-6 MLG. The AD includes two requirements. The thresholds and intervals for both requirements are defined in terms of calendar time and hours of flight time:

1. Recurring in-service inspections for corrosion and cracking of the MLG leg in accordance with SB 6/380 until accomplishment of the first instance of 'Check D' inspection.

.../2

2. Recurring 'Check D' inspections of the MLG leg. 'Check D' inspection, as defined in the maintenance manual PSM 1-6-7 is "a meticulous inspection usually requiring disassembly of the component and/or a bench or calibration test." SB 6/380 required the first such inspection to include abrasive cleaning and inspection of the interior surfaces of the landing gear leg as described in the overhaul manual PSM 1-6-6 Chapter 32-10-11 revised December 15, 1978. The overhaul manual revision included a revised procedure for the application of internal finish to improve corrosion resistance. The application of the revised internal finish constitutes embodiment of DHC-6 modification number 6/1660.

In 2012, in response to failures associated with poor inspection and overhaul incidents, Viking updated the maintenance program for the main landing gear. SB V6/0016 was issued to communicate the updated maintenance program, superseding SB 6/380 Rev. C. The updated maintenance program described in SB V6/0016 includes:

- New overhaul threshold and repeat intervals (based on both calendar time and number of landings)
- A requirement to ensure each MLG leg was permanently marked with a unique serial number
- Improved instructions for overhaul. The improved instructions for overhaul were contained in temporary revision TR 32-18 to the component maintenance manual for the MLG, C6U1103. That revision refers to drawing C6VMK0002 which in turn refers to Viking Process Specification VPS 44.03.

SB V6/0016 was revised to Rev. A in the same year to correct some errors and clarify some requirements. The essential requirements of the SB were unchanged.

In 2018, SB V6/0016 was revised to Rev. B. That revision specifies to perform inspection and overhaul in accordance with Technical Bulletin (TB) V6/00063.

Both VPS 44.03 and TB V6/00063 require the application of internal finish that is equivalent to MOD 6/1660.

Since AD CF-80-06 requires accomplishment of modification 6/1660, and the updated overhaul instructions do not refer to that modification, it has been difficult for some operators and maintenance organizations who have complied with SB V6/0016 to confirm or demonstrate compliance to the requirements of the AD.

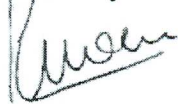
Pursuant to CAR Part VI, Division III, Section 605.84 (4), TCCA has reviewed your request and hereby approves the AMOC No. AARDG 2018/A63 with AD CF-80-06. Overhaul of DHC-6 MLG leg in accordance with SB V6/0016 Rev. NC, Rev. A or Rev. B, drawing C6VMK0002 or TB V6/00063 is considered equivalent to MOD 6/1660 and fulfils the requirement of AD CF-80-06 corrective action B to accomplish Check D inspection in accordance with the requirements of SB 6/380. All other requirements of the AD continue to apply.

Please note that TCCA will issue a new AD in the coming weeks that will mandate compliance with DHC-6 Airworthiness Limitations Manual PSM 1-6-11 Revision 9. That AD will cancel a number of related ADs including AD CF-80-06. That new AD will render this AMOC void, however this AMOC may still be used for reference to clarify the serviceability of MLG legs that have been overhauled since the publication of SB V6/0016 in 2012.

This AMOC applies to de Havilland model DHC-6 aeroplanes that are currently on the Canadian Registry. For non-Canadian registered aeroplanes, approval must be obtained from the governing regulatory authority of the state of registry.

Should you have any questions on this AMOC, please contact Mr. Ross McGowan, Senior Engineer, Corrective Action - Continuing Airworthiness, by phone at 613-219-8937 or via email at [ross.mcgowan@tc.gc.ca](mailto:ross.mcgowan@tc.gc.ca).

Yours truly



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