AD Number: **CF-2014-38**
Issue Date: **20 October 2014**

AIRWORTHINESS DIRECTIVE

The following airworthiness directive (AD) may be applicable to an aircraft which our records indicate is registered in your name. ADs are issued pursuant to ***Canadian Aviation Regulation* (CAR) 521 Division X**. Pursuant to **CAR 605.84** and the further details of **CAR Standard 625, Appendix H**, the continuing airworthiness of a Canadian registered aircraft is contingent upon compliance with all applicable ADs. Failure to comply with the requirements of an AD may invalidate the flight authorization of the aircraft. Alternative means of compliance shall be applied for in accordance with **CAR 605.84** and the above-referenced **Standard**.

This AD has been issued by the Continuing Airworthiness Division (AARDG), National Aircraft Certification Branch, Transport Canada, Ottawa, telephone 613 952-4357.

Number: CF-2014-38 **Effective Date:** 3 November 2014

ATA: 27 **Type Certificate:** A-22

Subject: Flight Controls – Failed Locknuts (MS21042) in the Horizontal Stabilizer

Applicability: Viking Air Limited model DHC-2 Mk. I, DHC-2 Mk. II and DHC-2 Mk. III aeroplanes, all serial numbers.

Compliance: As indicated below, unless already accomplished.

Background: There has been an in-service report of failed MS21042 locknuts on the horizontal stabilizer attach bracket of a DHC-2 Mk. I aeroplane. Laboratory examinations of these nuts found intergranular fractures typical of hydrogen embrittlement possibly due to the introduction of hydrogen during the manufacturing process.

Failure of these nuts could result in detachment of the horizontal stabilizer and loss of control of the aeroplane.

This AD mandates the inspection and replacement, of the horizontal stabilizer attach bracket MS21042 locknuts.

Corrective Actions:

Within 50 hours air time from the effective date of this AD, perform a visual inspection of the six locknuts of the horizontal stabilizer attach brackets to determine their type in accordance with the Accomplishment Instructions of Viking Alert Service Bulletin (ASB) V2/0007, Revision 'NC', or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

If any of the installed locknuts is of the MS21042 type, prior to further flight, remove and replace the locknut with a new MS21044 type locknut in accordance with the Accomplishment Instructions of the above-noted ASB.

Following the effective date of this AD, no person shall install MS21042 locknuts on the horizontal stabilizer attach bracket of DHC-2 aeroplanes.

Authorization: For the Minister of Transport,

ORIGINAL SIGNED BY

Derek Ferguson
Chief, Continuing Airworthiness

Contact: Yosha Mendis, Continuing Airworthiness, Ottawa, telephone 613-952-4357, facsimile 613-996-9178 or e-mail AD-CN@tc.gc.ca or any Transport Canada Centre.