



AIRWORTHINESS DIRECTIVE

This Airworthiness Directive (AD) is issued pursuant to Canadian Aviation Regulation (CAR) 521.427. No person shall conduct a take-off or permit a take-off to be conducted in an aircraft that is in their legal custody and control, unless the requirements of CAR 605.84 pertaining to ADs are met. Standard 625 - Aircraft Equipment and Maintenance Standards Appendix H provides information concerning alternative means of compliance (AMOC) to ADs.

Number: CF-2019-39
Effective Date: 14 November 2019
ATA: 28
Type Certificate: A-224

Subject:
 Fuel System – Fuel Tank Connection Hose Deterioration

Applicability:
 Diamond Aircraft Industries Inc. model DA 40, DA 40 D, DA 40 F and DA 40 NG aeroplanes, all serial numbers.

Compliance:
 As indicated, unless already accomplished.

Background:
 Diamond Aircraft Industries (DAI) has received reports of fuel tank connection hose deterioration on the DA 40 aeroplanes. In a number of cases, rubber parts from the hoses were found in the fuel tank and gascolator. Investigation determined that the affected connection hoses originated from two isolated batches. Some of the affected hoses were installed on aeroplanes during production, while others were sold as replacement parts.

Deterioration of fuel tank connection hoses, if not corrected, could result in contamination of the fuel system and restriction of fuel flow, leading to fuel starvation and reduced control of the aeroplane.

To address this unsafe condition, DAI issued Mandatory Service Bulletins (MSBs) to provide instructions for identifying and replacing the affected parts. The MSBs also provide instructions to inspect the fuel tank chambers and remove rubber parts that have detached from the hoses. This AD mandates replacement of the affected parts, associated inspections and corrective actions detailed in the MSBs.

Corrective Actions:

- A. Installation of Replacement Parts
 1. For the purpose of this AD, the applicable MSBs are those listed in Table 1 or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada:

For Aeroplane Model	DAI MSB Number
DA 40	MSB 40-087 Rev. 1 including associated Work Instruction WI-MSB 40-087 Rev. 1
DA 40 D	MSB D4-107 Rev. 1 including associated Work Instruction WI-MSB D4-107 Rev. 1
DA 40 F	MSB F4-037 Rev. 1 including associated Work Instruction WI-MSB F4-037 Rev. 1
DA 40 NG	MSB 40NG-064 Rev. 1 including associated Work Instruction WI-MSB 40NG-064 Rev. 1

Table 1 List of Applicable MSBs

2. For the purpose of this AD, an affected part is a fuel tank connection hose having part number:
 - a. D4D-2817-10-70 installed during production on DA 40 NG aeroplanes, serial numbers listed in the applicable MSB; or
 - b. D4D-2817-10-70 or BENOLPRESS from specific service centre purchases listed in the applicable MSBs.
3. From the effective date of this AD, an affected part is not eligible for installation as a replacement part.

B. Replacement of Installed Affected Parts

1. Within 100 hours air time or 2 months, whichever occurs first, from the effective date of this AD, replace each affected part in accordance with the applicable MSBs.
2. Within 100 hours air time or 2 months, whichever occurs first, from the effective date of this AD, replace each part that was installed as a replacement part on or after 13 July 2017, if it cannot be ascertained that the part is not an affected part listed in A.2.a. or A.2.b. above.

C. Inspection of Main Fuel Tank Chambers and Removal of Detached Rubber Parts

1. Before further flight after replacing a fuel tank connection hose as required by Paragraph B above, inspect the main fuel tank chambers and remove any detached rubber parts in accordance with the applicable MSBs.

Authorization:

For the Minister of Transport,

ORIGINAL SIGNED BY

Rémy Knoerr
Chief, Continuing Airworthiness
Issued on 31 October 2019

Contact:

Philip Tang, Continuing Airworthiness, Ottawa, telephone 888-663-3639, facsimile 613-996-9178 or e-mail AD-CN@tc.gc.ca or any Transport Canada Centre.