

# Airworthiness Directive Schedule

## Aeroplanes

### Diamond DA 40 Series

21 November 2019

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- Notes:**
1. This AD schedule is applicable to the Diamond DA 40, DA 40 D and DA 40 F aircraft manufactured under Transport Canada Type Certificate Data Sheet A-224 (formerly manufactured under EASA Type Certificate A.022).  
  
With effect from 15 November 2017 the design and continuing airworthiness responsibility for DA 40, DA 40 F, DA 40 D and DA 40 NG aircraft was transferred from Diamond Aircraft Industries GmbH of Austria and EASA, to Diamond Aircraft Industries Inc. and Transport Canada.
  2. Transport Canada is the National Airworthiness Authority (NAA) responsible for the issue of State of Design Airworthiness Directives (ADs) for these aircraft. State of Design ADs can be obtained directly from the Transport Canada website at <http://wwwapps3.tc.gc.ca/Saf-Sec-Sur/2/cawis-swimn/awd-lv-cs1401.asp?rand>  
  
EASA ADs listed in this schedule can be obtained directly from the EASA website at <http://ad.easa.europa.eu/>
  3. The date above indicates the amendment date of this schedule.
  4. New or amended ADs are shown with an asterisk\*
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<b>From 1 October 2012 the Civil Aviation Authority of New Zealand (CAA) will no longer rewrite the text of State of Design ADs. Applicable State of Design ADs will be listed below with linked directly to them. You can also obtain them directly from the National Airworthiness Authority (NAA) websites. Links to the NAA websites are available on the CAA website at <a href="http://www.caa.govt.nz/airworthiness-directives/states-of-design/">http://www.caa.govt.nz/airworthiness-directives/states-of-design/</a> If additional NZ ADs need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ they will be added to the list below.</b>		
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**DCA/DIAMOND/1 Fuel Filter - Modification**

- Applicability:** Model DA40D, S/N 40.080, 40.084, D4.001 through D4.020 and D4.037.
- Requirement:** To prevent the malfunctioning of a thermostat valve in the fuel filter assembly from causing a fuel vapor lock and in-flight power loss, modify fuel filter assembly and fuel return line per DAI MSB 40-023.  
(Austrian AD No 115 refers)
- Compliance:** Before further flight
- Effective Date:** 30 October 2003

**DCA/DIAMOND/2 FADEC Wire Harness - Inspection**

- Applicability:** Model DA40D S/Ns D4.020 thru D4.026, D4.041, D4.043 thru D4.045, D4.049, D4-056, D4.060 thru D4.064, D4.066, D4.067, and D4.078.
- Requirement:** The above aircraft may have an incorrect wire harness installation that can cause a short circuit leading to an in-flight engine shut down. The current flight manual emergency procedures do not contain the necessary measures to reset the FADEC and restart the engine. To avoid sudden loss of engine power accomplish the following;
1. Insert a temporary revision into the flight manual in accordance with Diamond Aircraft Industries GmbH MSBD4-029.
  2. Inspect FADEC wire harness in accordance with the above mentioned MSB.  
(Austrian AD A-2004-002 refers)
- Note:** MSB is available from <http://www.austrocontrol.at/austro/ta.html>
- Compliance:**
1. Before further flight.
  2. Within 50 hours TIS or 31 March 2004 whichever occurs first.
- Effective Date:** 26 February 2004

**DCA/DIAMOND/3 Cancelled – DCA/DIAMOND/9 refers**

**Effective Date:** 30 April 2009

**DCA/DIAMOND/4A Fuel Selector Valve – Inspection**

- Applicability:** Model DA40 aircraft, S/Ns 40.006 through 40.079, and 40.081 through 40.083, and 40.201 through 40.417 fitted with fuel shaft P/N D41-2823-20-00 Rev “-“.
- Requirement:** To prevent universal joint failures between the fuel selector and the fuel valve, which might remain unrecognized by the pilot and could result in fuel starvation during flight and/or the unavailability of the emergency fuel shut-off function, inspect the universal joints of the fuel selector/fuel valve assembly, per Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 40-030/3.  
  
If any defects are found, replace the complete drive assembly per MSB No. MSB 40-030/3, prior to further flight.
- Note 1:** The MSB is available from <http://www.austrocontrol.at/en/home/index.html>

**Note 2:** The installation of universal joints per MSB No. MSB 40-030/3 is a terminating action to the repetitive 50 hours TIS inspection. Thereafter inspections to be accomplished per Aircraft Maintenance Manual AMM-TR-MÄM-40-142/a.

(EASA AD 2006-0067 refers and supersedes Austrian AD A-2004-003)

**Compliance:** For aircraft with less than 200 hours TSN, within 50 hours TIS or by 25 April 2007, whichever is the sooner, and thereafter at intervals not to exceed 50 hours TIS until a modified universal joint has been fitted per MSB No. MSB 40-030/3.

For aircraft with more than 200 hours TSN, within the next 15 hours TIS or by 25 April 2007, whichever is the sooner, and thereafter at intervals not to exceed 50 hours TIS until a modified universal joint has been fitted per MSB No. MSB 40-030/3.

**Effective Date:** DCA/DIAMOND/4 - 30 March 2006  
DCA/DIAMOND/4A - 25 January 2007

#### **DCA/DIAMOND/5 Engine Fuel System Contamination – Inspection**

**Applicability:** Model DA 40 aircraft fitted with Garmin G1000 EASA STC.IM.A.S.01023 (FAA STC SA01254WI) with less than 50 hours TTIS, S/Ns 40.448 through 40.673, excluding 40.538, 40.590, 40.641, 40.642, 40.644, 40.651, 40.654, 40.655 and 40.669.

**Requirement:** To prevent contamination of the fuel supply lines and indicating system possibly causing improper engine operation, or in flight engine failure, accomplish the instructions in Diamond Aircraft Industries Mandatory Service Bulletin MSB 40-048/2.

(EASA AD 2006-0295-E refers)

**Compliance:** Before further flight or by 31 January 2007, whichever is the sooner.

**Effective Date:** 30 November 2006

#### **DCA/DIAMOND/6 Mixture Control Cable – Inspection**

**Applicability:** Model DA40 aircraft, S/N 40.006 through to 40.020, 40.022 through to 40.027, 40.030, 40.031, 40.038 through to 40.040, 40.046, 40.047, 40.050, 40.052, 40.054, 40.055 and 40.057.

**Requirement:** To prevent failure of the crimp between the cable and connector due to possible poor crimp quality combined with high cable friction which could result in loss of mixture control, inspect the mixture cable per Diamond Aircraft Industries GmbH SB No. MSB40-012 dated 19 July 2002.

If any defect is found or the quality of the crimp is suspect, replace the cable per SB No. MSB40-012 before further flight.

(Austrian AD 112 refers)

**Compliance:** Before further flight unless previously accomplished.

**Effective Date:** 30 April 2009

**DCA/DIAMOND/7      Aileron/Flap Bellcrank and Rod Ends – Inspection**

**Applicability:** Model DA 40 D aircraft, all S/N fitted with P/N DA4-2717-50-00 aileron bellcranks or P/N DA4-2757-30-00 flap bellcranks.

**Note 1:** DA 40 D aircraft with S/N 40.080, 40.084, D4.001 through to D4.188, D4.190 through to D4.261, D4.263 through to D4.317, D4.326 through to D4.329 and 40.DS001 through to 40.DS004 are known to have been delivered with P/N DA4-2717-50-00 aileron bellcranks, P/N DA4-2757-30-00 flap bellcranks and bent P/N DAI-9027-00-01 rod ends.

**Requirement:** To prevent failure of the aileron or flap control system due to possible chafing damage of control rods which could result in loss of aircraft control, accomplish the following:

1. Replace the aileron bellcrank P/N DA4-2717-50-00 with improved design aileron bellcrank P/N DA4-2717-50-00\_01.

Replace the flap bellcrank P/N DA4-2757-30-00 with improved design flap bellcrank P/N D60-2757-30-00.

If any bent rod ends are found, replace with straight parts per Diamond Aircraft Industries GmbH MSB No. D4-059 before further flight.

2. Aileron bellcranks P/N DA4-2717-50-00 and flap bellcranks P/N DA4-2757-30-00 or any bent rod ends shall not be fitted to any aircraft as replacement parts.

**Note 2:** Accomplish the requirements of this AD per Diamond Aircraft Industries GmbH MSB-D4-059 dated 14 February 2008 or MSB-D4-059/1 dated 31 March 2008 or later approved revisions.  
(EASA AD 2008-0114 refers)

**Compliance:** 1. Within the next 200 hours TIS unless previously accomplished.  
2. From 30 April 2009.

**Effective Date:** 30 April 2009

**DCA/DIAMOND/8      Upper Wing Skin-to-Main Spar Adhesive Joint – Inspection**

**Applicability:** Model DA 40 aircraft, S/N 40.377, 40.420, 40.422, 40.644 through to 40.693, 40.695 through to 40.842, 40.844, 40.846 through to 40.887, 40.889 through to 40.912, 40.915 through to 40.917, 40.919 through to 40.929, 40.931, 40.932, 40.934 through to 40.940, 40.944 through to 40.949, 40.951 through to 40.953, 40.955 through to 40.957, 40.961, 40.964 and 40.971.

Model DA 40 F aircraft, S/N 40.FC007 through to 40.FC029.

**Requirement:** A number of wings manufactured by Diamond Aircraft Industries Inc. in Canada have been found with voids in the adhesive joint between the main spar caps and the upper wing skins. The available information indicates that wings with voids within established criteria continue to meet the certification design limits.

To determine whether the voids in the adhesive joint between the main spar caps and the upper wing skin are within established criteria, inspect the adhesive joint per Diamond Aircraft Industries GmbH MSB-40-060 / MSBF4-016 dated 20 October 2008 or later approved revisions.  
Report the results to Diamond Aircraft Industries per MSB-40-060 / MSB-F4-016.

If any voids are found that exceed the criteria specified in MSB-40-060 / MSB-F4-016 accomplish a manufacturer approved repair before further flight.  
(EASA AD 2008-0224 refers)

**Compliance:** Within the next 100 hours TIS or by 30 June 2009 whichever occurs sooner, unless previously accomplished.

**Effective Date:** 30 April 2009

**DCA/DIAMOND/9      Nose Landing Gear Leg – Inspection**

**Applicability:** Model DA 40, DA 40 D and DA 40 F aircraft, all S/N not fitted with NLG leg P/N D41-3223-10-00\_1 or \_2, \_3 etc. and higher.

**Note 1:** This AD supersedes DCA/DIAMOND/3 (Austrian AD A-2005-005 refers). The applicability of this AD revised to exclude those aircraft fitted with NLG leg P/N D41-3223-10-00\_1 or \_2, \_3 etc. and higher.

**Requirement:** To prevent failure of the NLG due to possible cracks in the pivot axle which could result in collapse of the NLG, accomplish the following:

1. Inspect the NLG leg per Diamond Aircraft Industries GmbH MSB-40-046/3 / MSBD4-046/3 dated 17 November 2008 or later approved revisions.

If any cracks are found, replace the NLG leg with a serviceable unit per MSB40-046/3 / MSBD4-046/3 before further flight.

2. Once a NLG leg P/N D41-3223-10-00\_1 or \_2, \_3 etc. and higher has been fitted to the aircraft, then a NLG P/N D41-3223-10-00 shall not be fitted to that aircraft.

**Note 2:** Inspections and corrective actions accomplished prior to the effective date of this AD per MSB40-046 / MSBD4-046 at original issue or issue 2 are acceptable to comply with the initial requirements of this AD. After the effective date of this AD the repetitive inspections and corrective actions must be accomplished per MSB40-046 / MSBD4-046 issue 3.

**Note 3:** Fitting a NLG leg P/N D41-3223-10-00\_1 or \_2, \_3 etc. and higher to the aircraft is a terminating action to the repetitive inspections required by this AD.

(EASA AD 2009-0016 refers)

**Compliance:** 1. For aircraft that are predominantly (more than 50% of the time) operated from grass runways:

Within the next 25 hours TIS unless previously accomplished and thereafter at intervals not to exceed 100 hours TIS.

For aircraft that are predominantly (more than 50% of the time) operated from paved runways:

Within the next 100 hours TIS unless previously accomplished and thereafter at intervals not to exceed 200 hours TIS.

2. From 30 April 2009.

**Effective Date:** 30 April 2009

**DCA/DIAMOND/10A Rear Passenger Door – Inspection**

**Applicability:** Model DA 40, DA 40 D and DA 40 F aircraft, all S/N.

**Note:** The requirements of this AD revised to include the AFM at the latest revision (which includes the requirements in AFM-TR-MAM 40-428) as an acceptable means to comply with the requirements in this AD.

**Requirement:** To prevent loss of the rear passenger door in flight, accomplish the following:

1. Accomplish the following actions concurrently per the instructions in Diamond Aircraft Industries GmbH Mandatory Service Bulletins No. MSB 40-070, MSB D4-079 and MSB F4-024 dated 30 April 2010 (single document) and the associated Work Instructions or later approved revisions of these documents

Determine the P/N of the rear passenger door retaining bracket. If a P/N DA4-5200-00-69 is found fitted, replace with a bracket P/N DA4-5200-00-69-SB, and

Revise the AFM and incorporate DAI Temporary Revision AFM-TR-MAM 40-428 or amend the AFM with a revision that includes the information in AFM-TR-MAM 40-428.

2. A rear passenger door retaining bracket P/N DA4-5200-00-69 shall not be fitted to any aircraft.

(EASA AD 2010-0235R1 refers)

- Compliance:**
1. Within the next 200 hours TIS after 25 November 2010 (the effective date of DCA/DIAMOND/10) or by 25 November 2011 whichever occurs sooner.
  2. From 25 November 2010 (the effective date of DCA/DIAMOND/10).

**Effective Date:** DCA/DIAMOND/10 - 25 November 2010  
DCA/DIAMOND/10A - 30 June 2011

**DCA/DIAMOND/11 Cabin Air Conditioning System – Deactivation**

**Applicability:** Model DA 40 aircraft, all S/N embodied with STC SA03674AT (a vapor cycle system (VCS) cabin air conditioning system) per DER Services Master Document List MDL-2006-020-1 revision C, dated 3 February 2009; or revision D, dated 22 April 2009; or revision E, dated 12 May 2010; or revision F, dated 6 July 2010.

**Note 1:** STC SA03674AT is held by Premier Aircraft Service (formerly held by DER Services, Inc.)

**Requirement:** To correct an unsafe condition with the vapor cycle system (VCS) due to reports of damage found around the VCS compressor mounting areas during maintenance inspections, accomplish the following actions per Premier Aircraft Service Work Instruction PAS-WI-MSB-40-2011-001, dated 4 March 2011 and Premier Aircraft Service MSB No. PAS-MSB-40-2011-001, dated 4 March 2011:

- Deactivate the VCS system.
- Pull and collar the compressor circuit breaker and place a placard above the circuit breaker stating "INOP."
- Remove the VCS compressor and associated mounting hardware.
- Revise the aircraft weight and balance.

**Note 2:** Optional actions: If all the above mentioned actions have been accomplished, the VCS compressor may be reinstalled and the air conditioning system reactivated per the instructions in Premier Aircraft Service Service Bulletin No. PAS-SB-40-2011-002, dated 18 August 2011; Seamech International Inc. Vapor Cycle Air Conditioning with Automatic Climate Control Instructions for Continued Airworthiness ASI-772216A revision G, dated 9 August 2011; Seamech International Inc. Kit Compressor Mounting, Drawing SII 2216155 revision D, dated 21 July 2011 and DER Services

Installation Instructions Engineering Order EO-2006-020-1 revision F, dated 18 August 2011.

(FAA AD 2011-21-10 refers)

**Compliance:** Within 100 hours TIS after installation of STC SA03674AT, or by 16 December 2011 whichever occurs later.

**Effective Date:** 16 November 2011

**DCA/DIAMOND/12 Canceled – EASA AD 2012-0024R1 refers**

**Effective Date:** 26 May 2015

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**EASA AD 2013-0145     Aft Main Spar / Cabin Area – Modification**

**Effective Date:**    29 July 2013

**EASA AD 2012-0024R1   Turbocharger Hose – Inspection**

**Effective Date:**    26 May 2015

**EASA AD 2016-0126     Alternator Cable – Inspection**

**Effective Date:**    6 July 2016

**EASA AD 2017-0086     Electronic Control Unit – Modification**

**Effective Date:**    26 May 2017

**\* Transport Canada AD CF-2019-39   Fuel Tank Connection Hose – Inspection**

**Applicability:**     DA 40, DA 40 D, DA 40 F and DA 40 NG aeroplanes, all S/N.

**Effective Date:**    21 November 2019