

**MANDATORY SERVICE BULLETIN NO. MSB D4-107 REV. 3**  
**SUPERSEDES MSB D4-107 REV. 2**

**I TECHNICAL DETAILS**

**I.1 Category**

Mandatory.

**I.2 Airplanes Affected**

Type: DA 40 D

S/N: all aircraft equipped with fuel tank connection hoses from the service center purchases listed in Section I.11.

**NOTE:** if it cannot be ensured that an airplane is not equipped with fuel tank connection hoses (flexible couplings) originating from one of the service center purchases listed in Section I.11, the fuel tank connection hoses of the airplane must be replaced in accordance with WI-MSB D4-107.

**I.3 Date of Effectivity**

01-Jul-2019

**I.4 Time of Compliance**

Within 100 flight hours from the date of effectivity, but not later than 31-Dec-2019.

**I.5 Subject**

Replacement of fuel tank interconnect hose (flexible coupling).

ATA code: 28-10

**I.6 Reason**

Diamond Aircraft Industries have received reports of the deterioration of fuel tank connection hoses on DA 40 airplanes in the field. During investigation, it was found that the deteriorated fuel tank connection hoses (flexible couplings) originate from two isolated batches. The affected parts were sold as replacement parts from 13-Jul-2017 until 26-Feb-2019. All parts from these two isolated batches need to be replaced.

**I.7 Concurrent Documents**

None.

**I.8 Approval**

The technical content of this document is approved as part of the type design.

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**I.9 Accomplishment/Instructions**

Comply with WI-MSB D4-107, latest effective issue.

**I.10 Mass (Weight) and CG**

The change in mass and CG is negligible.

**I.11 List of Service Center Purchases Containing Fuel Tank Connection Hoses (Flexible Couplings)**

Invoice Date (DD.MM.YYYY)	Form Tracking Number (stated on Form One, Block 4)	Work Order/Contract/ Invoice (Stated on Form One, Block 5)	Invoice Number
13.07.2017	AJ32479	AS1800568	AI1800543
13.07.2017	AJ32481	AS1800570	AI1800508
17.07.2017	AJ32522	AS1800664	AI1800770
20.07.2017	AJ32659	AS1800918	AI1800812
20.07.2017	AJ32662	AS1800921	AI1800751
21.07.2017	AJ32674	AS1800954	AI1800835
21.07.2017	AJ32678	AS1800961	AI1800750
01.08.2017	AJ32810	AS1801208	AI1801190
01.08.2017	AJ32814	AS1801212	AI1800938
02.08.2017	AJ32840	AS1801264	AI1800975
02.08.2017	AJ32844	AS1801276	AI1801116
07.08.2017	AJ32900	AS1801389	AI1801058
04.08.2017	AJ32920	AS1801449	AI1801128
14.08.2017	SI155487	SH183493	SI155487
16.08.2017	AJ33053	AS1801672	AI1801340
21.08.2017	AJ33123	AS1801801	AI1801499
22.08.2017	AJ33162	AS1801891	AI1801589
28.08.2017	AJ33314	AS1802169	AI1801720
30.08.2017	AJ33348	AS1802220	AI1802410

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Invoice Date (DD.MM.YYYY)	Form Tracking Number (stated on Form One, Block 4)	Work Order/Contract/ Invoice (Stated on Form One, Block 5)	Invoice Number
31.08.2017	AJ33392	AS1802292	AI1801837
11.09.2017	AJ33670	AS1802849	AI1802270
13.09.2017	AJ33737	AS1802975	AI1802287
20.09.2017	AJ33934	AS1803313	AI1802730
21.09.2017	AJ33973	AS1803399	AI1802805
25.09.2017	AJ34031	AS1803498	AI1802879
04.10.2017	AJ34384	AS1804142	AI1803454
05.10.2017	AJ34399	AS1804163	AI1803394
11.10.2017	AJ34552	AS1804441	AI1803615
12.10.2017	AJ34567	AS1804466	AI1803680
12.10.2017	AJ34576	AS1804478	AI1803636
19.10.2017	AJ34781	AS1804804	AI1803944
30.10.2017	AJ34980	AS1805146	AI1804232
10.11.2017	AJ35336	AS1805808	AI1804696
10.11.2017	SI157782	SH186890	SI157782
20.11.2017	AJ35553	AS1806219	AI1805415
27.11.2017	SOI071638	SO071548	SOI071638
01.12.2017	AJ35876	AS1806823	AI1805600
05.12.2017	AJ35949	AS1806986	AI1808509
06.12.2017	AJ36018	AS1807105	AI1805881
11.12.2017	AJ36124	AS1807294	AI1806156
12.12.2017	SI158555	SH188052	SI158555
20.12.2017	AJ36394	AS1807861	AI1806533
05.01.2018	AJ36524	AS1808124	AI1806716

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Invoice Date (DD.MM.YYYY)	Form Tracking Number (stated on Form One, Block 4)	Work Order/Contract/ Invoice (Stated on Form One, Block 5)	Invoice Number
10.01.2018	AJ36637	AS1808343	AI1806846
18.01.2018	AJ36876	AS1808762	AI1807249
19.01.2018	AJ36911	AS1808809	AI1807538
24.01.2018	AJ37033	AS1809023	AI1807421
31.01.2018	SOI071699	SO071429	SOI071699
07.02.2018	AJ37400	AS1809627	AI1808056
07.02.2018	AJ37410	AS1809652	AI1807932
08.02.2018	AJ37452	AS1809731	AI1808129
15.02.2018	SI159885	SH190023	SI159885
27.02.2018	AJ37978	AS1810646	AI1808807
28.03.2018	SI160851	SH191480	SI160851
17.04.2018		ASL0000519	ASI180262
06.06.2018		ASL0000603	ASI180316
30.10.2018		ASL0000828	ASI-18-0119
20.12.2018	SI167964	SH201813	SI167964
26.02.2019	SI169707	SH204271	SI169707

**II PLANNING INFORMATION**

**II.1 Material and Availability**

See WI-MSB D4-107, latest effective issue.

**II.2 Special Tools**

None.

**II.3 Labour Effort**

Approximately 16 hours will be required to accomplish this service bulletin.

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**II.4 Credit**

Parts and labour effort for all aircraft within warranty.

**II.5 Reference Documents**

DA 40 series Airplane Maintenance Manual, Doc. No. 6.02.01, latest effective issue.

**III REMARKS**

1. All work must be done by a certified aircraft service station, or a certified aircraft maintenance mechanic.
2. All work, in particular that which is not especially described in this service bulletin, must be done in accordance with the referenced Maintenance Manual.
3. Completion of all work must be recorded in the logbook.
4. If material and/or labour hours are subject to be credited through Diamond Aircraft Industries, the service bulletin must be done within the time of compliance, and the following documents must be sent to Diamond Aircraft Industries not later than 30 days after completion of work.
  - Warranty Application
  - Work Report of the new installed fuel tank connection hoses D4D-2817-10-70\_01
  - Form One of replaced affected fuel tank connection hoses D4D-2817-10-70, and the Work Report of their installation
5. In case of doubt, contact Diamond Aircraft Industries.

To obtain satisfactory results, procedures specified in this service bulletin must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft cannot be responsible for the quality of work performed in accomplishing the requirements of this service bulletin. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this service bulletin if it is not incorporated.

If you no longer own the aircraft to which this service bulletin applies, please forward it to the current owner, and send the name of the current owner to Diamond Aircraft at the address below.

Diamond Aircraft Industries Inc. 1560 Crumlin Sideroad, London, Ontario, Canada N5V 1S2

Customer Support: Phone: (519) 457-4041 Fax: (519) 457-4045 E-mail: [custsupp@diamondair.com](mailto:custsupp@diamondair.com)  
Technical Publications: E-mail: [Techpubs@diamondair.com](mailto:Techpubs@diamondair.com)



**EXECUTION REPORT TO  
SERVICE BULLETIN  
MSB D4-107 REV. 3**

**AIRPLANE DATA**

Airplane Serial Number \_\_\_\_\_  
Airplane Registration \_\_\_\_\_  
Airplane Operator \_\_\_\_\_  
Hours of Operation Airplane (TSN) \_\_\_\_\_  
Typical operation of airplane private, club, training, other: \_\_\_\_\_

**MAINTENANCE DATA:**

Inspection carried out on \_\_\_\_\_  
Inspection carried out by \_\_\_\_\_  
During scheduled inspection: Yes  No   
Hoses deteriorated? Yes  No   
Date \_\_\_\_\_

\_\_\_\_\_  
Name Signature

Please e-mail the completed form to [Techpubs@diamondair.com](mailto:Techpubs@diamondair.com)

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**WORK INSTRUCTION WI-MSB D4-107 REV. 0**

**I GENERAL INFORMATION**

**I.1 Subject**

Replacement of fuel tank connection hoses (flexible couplings).

**I.2 Reference Documents**

DA 40 series Airplane Maintenance Manual, Doc. No. 6.02.01, latest effective issue.

**I.3 Remarks**

1. All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
2. All work, in particular if not described in this work instruction, must be done in accordance with the referenced maintenance manual.
3. For conversion factors between SI units and US/Imperial units, refer to AMM Chapter 02.
4. In case of doubt, contact Diamond Aircraft Industries Inc.

**II DRAWINGS, SPECIAL TOOLS & MATERIALS**

**II.1 Drawings**

None.

**II.2 Special Tools**

None.

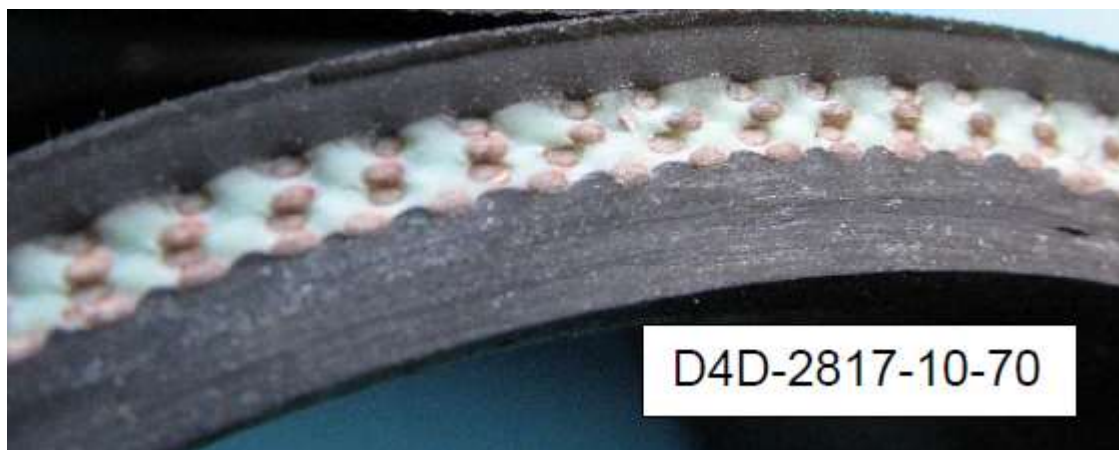
**II.3 Material**

Qty	Part Number	Description
2	D4D-2817-10-70_01	Fuel tank connection hose (flexible coupling) for DA 40 D
1	D4D-9028-07-02	Check valve in fuel transfer line

### **III INSTRUCTIONS**

**NOTE:** the following images show the difference between the two types of fuel tank connection hoses (flexible couplings) in the field.

- D4D-2817-10-70, this fuel tank connection hose has a light blue layer in the cross-section. Only a fraction of these hoses come from the affected two batches.



- D4D-2817-10-70\_01, this fuel tank connection hose has an all black cross section and is not affected.





### III.1 Replacement of Main Fuel Tank Connection Hoses

1. Remove the main fuel tank assembly from the aircraft in accordance with AMM Chapter 28-11.
2. Disassemble the main fuel tank assembly in accordance with AMM Chapter 28-11.
3. Examine the fuel tank connection hoses for damage, deterioration, and detached rubber parts.
4. If the fuel tank connection hoses are found to be damaged, inspect the fuel tank chambers, and remove detached rubber material in accordance with Section III.2 of this service bulletin.
5. Assemble the main fuel tank assembly with the new fuel tank connection hoses (P/N D4D-2817-10-70\_01) in accordance with AMM Chapter 28-11.
6. Install the main fuel tank assembly in to the aircraft in accordance with AMM Chapter 28-11.
7. Do steps 1 to 6 on the opposite side of the aircraft.
8. Clean working areas, and check for foreign objects.
9. Check all altered, replaced, repaired parts for proper function.
10. Test all systems in working area for proper function.
11. Make all necessary entries in the airplane logs.
12. Fill in the execution report, and send it to Techpubs@diamondair.com.

### III.2 Inspection of Main Fuel Tank Chambers and Removal of Detached Rubber Parts

1. Examine all fuel tank chambers for detached rubber material. Remove any detached rubber material from the fuel tank chambers.

**CAUTION:** pay increased attention to areas with limited access of the inner chamber of the main fuel tank, especially the area in the fuel trap and the area underneath the fuel trap (sediment trap & drain).

**NOTE:** to improve access and inspectability of these areas, the fuel low level switch, the fuel temperature sensor, and the fuel finger filter can be removed.

**NOTE:** optionally, use a borescope to inspect areas with limited access.

2. If removed during examination of the fuel tank chambers for detached rubber particles:
  - A. Install the fuel low level switch.
  - B. Install the fuel temperature sensor.
  - C. Install the fuel finger filter.
3. Remove, clean, and re-install the fuel gascolator filter in accordance with AMM Chapter 28-21.

4. Remove and inspect the check valve filter in the fuel transfer line. If the check valve filter is found to be contaminated, replace the check valve.

**CAUTION:** do not disassemble the fuel transfer check valve. Inspect visually.

5. Flush all fuel lines connecting the main fuel tanks to the gascolator with clean fuel.