

MANDATORY SERVICE BULLETIN NO. MSB 40-023

I. TECHNICAL DETAILS

1.1 Category

Mandatory.

1.2 Airplanes affected

DA 40 D

Serial numbers 40.080, 40.084, D4.001 up to and incl. D4.025, D4.028, D4.037, D4.053.

1.3 Time of Compliance

Prior to next flight.

1.4 Subject

Modification of the fuel system.

ATA-Code: --

1.5 Reason

Due to problems located in the fuel system, in the last weeks there were few malfunction indications and twice there were power loss in flight, lead to forced landings.

1.6 Concurrent documents

None.

1.7 Approval

The technical information or instructions contained in this document relate to the Design Change Advisory no. MÄM 40-107 which has been approved under the authority of MOT Design Organization Approval no. MOT JA-01.

The technical information contained in this document has been approved under the authority of JAA Design Organization Approval No. MOT JA-01.

1.8 Accomplishment/Instructions

The power loss occurs suddenly, followed by the illumination of ECU-A and ECU-B caution lights. For the failure there is no indication possible to check prior to flight.

The failures have been investigated and a modification of the fuel system is necessary. The modification is described in the Work Instruction which is part of this Service Bulletin.

Therefore do omit any further flight with your DA 40 D until the modification has been carried out.

Carry out the Work Instruction, item IV of this Service Bulletin.

1.9 Mass (Weight) and CG

Negligible.

II. PLANNING INFORMATION

2.1 Material & Availability

All parts can be ordered from Diamond Aircraft Industries GmbH or from your local General Distributor or Diamond Service Center.

NOTE: All parts listed below can also be procured locally. Contact Diamond Aircraft for standard parts specifications.

<u>Qty</u>	<u>Description</u>	<u>Part Number</u>
2	Fitting cap DASH 6	60.1610
1	Male adapter DASH 6 / DASH 6	60.1615
1	Bolt 9/16-20UNF (8 mm length)	60.1700
1	O-Ring	60.1705
a/r	Loctite 243	n/a

2.2 Special Tools

No special tools are required.

2.3 Labor effort

1 hour.

2.4 Credit

Not applicable.

2.5 Reference documents

- DA 40 Series Airplane Maintenance Manual, Doc. No. 6.02.01.
- Drawing no. D4D-7306-00-00"a".

III. REMARKS

1. All measures must be carried out by the manufacturer, a certified aircraft service station or a certified aircraft maintenance mechanic.
2. Accomplishment of the measures must be confirmed in the log book.
3. In case of doubt, contact Diamond Aircraft.

IV. WORK INSTRUCTION

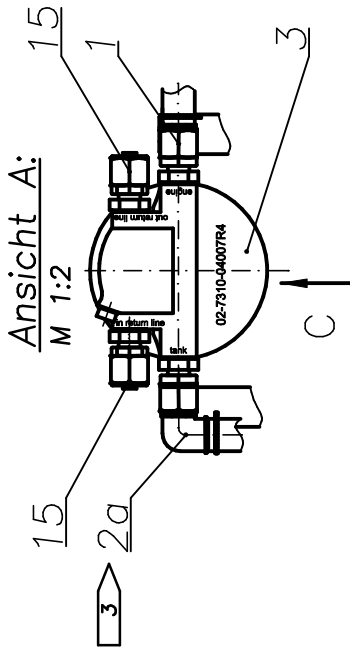
NOTE: For additional information see drawing no. D4D-7306-00-00"a".

1	Remove upper and lower cowling in accordance with Airplane Maintenance Manual, Doc. No. 6.02.01.
2	Remove fuel hoses from the fuel filter housing.
3	Remove fuel filter housing by removing the clamps.
4	Install new fitting caps p/n 60.1610 (item 15 on dwg. no. D4D-7306-00-00"a") to the connections of the fuel return lines in the housing cap of the filter.
5	Remove the drain valve from the ground of the housing.
6	Install bolt and O-Ring p/n 60.1700 and 60.1705 (items 17 and 18 on dwg. no. D4D-7306-00-00"a") instead of the drain valve and glue with Loctite 243.
7	Install filter housing with clamps to the filter mount.
8	Connect the fuel suction lines to the fuel filter housing.
9	Connect the fuel return line from the engine and the fuel return line to the fuel tank with the Male Adapter p/n 60.1615 (item 16 on dwg. no. D4D-7306-00-00"a").
10	Tighten fuel lines at the fuel filter mount with ty-rap.
11	Check for any chafing.

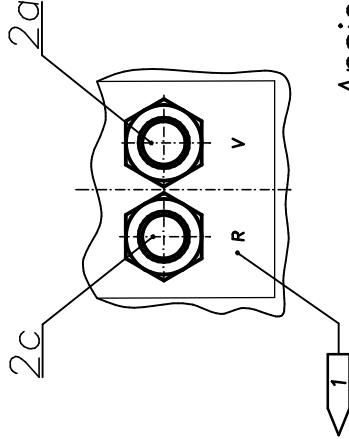
12	Ventilate the fuel system in accordance with Airplane Maintenance Manual, Doc. No. 6.02.01, chpt. 28-21-00.
13	Ensure a tight fit of all parts.
14	Check for foreign objects.
15	Perform an engine run up until engine temperatures are in the green range. Then shut down engine.
16	Check engine for fuel leakage.
17	Install upper and lower cowlings in accordance with Airplane Maintenance Manual, Doc. No. 6.02.01.

Notes (Hinweis zur Fertigung):

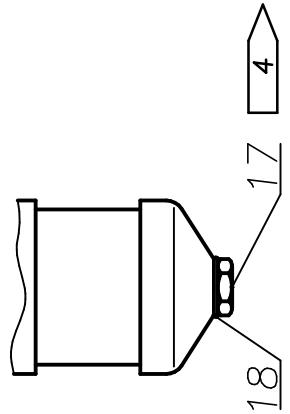
- 1 Fuel Flange Einbau gezeigt in D4D-7103-00-00.
- 2 Fuel flange installation shown in D4D-7103-00-00.
- 3 Kraftstoffleitungsinstallation gezeigt in D4D-2823-10-00.
- 4 Fuel hose installation shown in D4D-2823-10-00.
- Alle Kraftstoffleitungen mit Pos. 13, Firesleeve, überzogen. Pos 13 mit Pos. 14, Sicherungsdraht, an beiden Enden sichern.
- 1 Pull item 13, Firesleeve, over all fuel hoses. Secure item 13 with item 14, lock wire on both ends.
- Filter Drain Valve wird durch Position 17 ersetzt.
- 1 Filter drain valve has to be replaced by item 17.



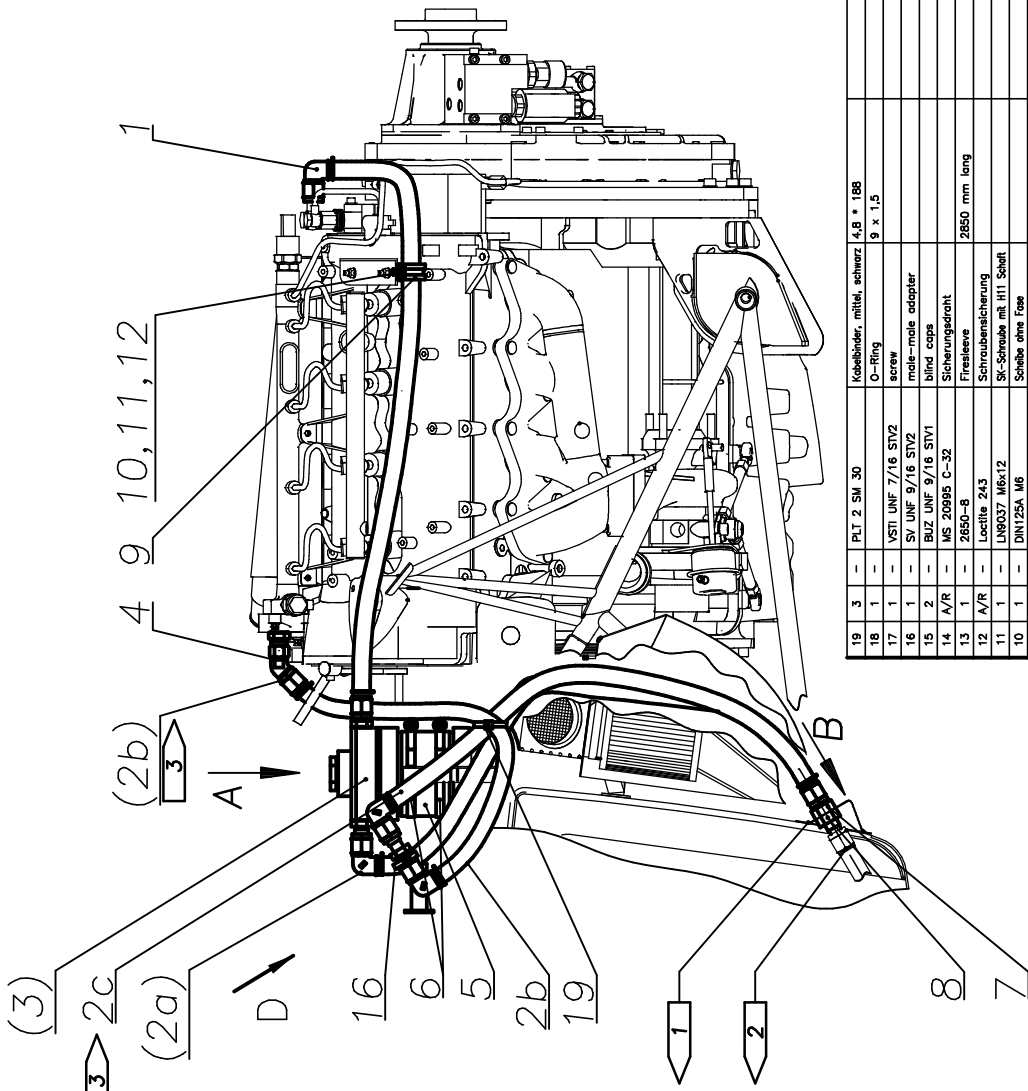
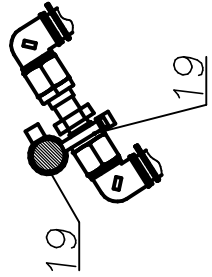
Ansicht B:
M 1:2



Ansicht C:
M 1:2



Ansicht D:
dargestellt ohne Filter
shown without filter



19	3	-	PLT 2 SM 30	Kabelbinder, mittel, schwarz 4,8 * 188 9 x 1,5	
18	1	-	OSTI UNF 7/16 STY2	O-Ring	
17	1	-	SV UNF 9/16 STY2	screw	
16	1	-	BUZ UNF 9/16 STV1	male-male adapter	
15	2	-	MS 20995 C-32	blind cap	
14	A/R	-	MS 20995 C-32	Sicherungsring	
13	1	-	Loctite 243	Firesleeve 2850 mm lang	
12	A/R	-	LW8037 M6x12	Schraubensicherung	
11	1	-	DH125A M6	SK-Schraube mit HI Schift	
10	1	-	02-421815005	Schleife ohne Fase	
9	1	-	AN 8289-6	Alu-Gummischelle 18/15	Fa. Würth
8	2	-	AN 832-6	Nut	
7	2	-	SOTS 80-100/12W1C7	Filling Union Steel	
6	2	-	097 5305029061	Schlauchschelle 90/29 50 mm lang	Fa. Titan Norma
5	1	-	E924106	45° fitting	Fa. ISA-Racing
4	1	-	02-7310-04007R4	Kraftstofffilter	
3c	1	-	AE 366012002280	Kraftstoffleitung	Fa. Werthenbach
2c	1	-	AE 366012002280	Kraftstoffleitung	Fa. Werthenbach
2a	1	-	AE 366012002280	Kraftstoffleitung	Fa. Werthenbach
1	1	-	AE 366012002300	Kraftstoffleitung	Fa. Werthenbach

Benennung: **Kraftstoffsystem installation**
Fuel System installation

Maßstab: NTS. (1:2)

Freigegeben: **DIN 7168 m**
DIN 7169 m
DIN 7170 m
DIN 7171 m
DIN 7172 m
DIN 7173 m
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DIN 7196 m
DIN 7197 m
DIN 7198 m
DIN 7199 m
DIN 7200 m

Zeichnungs Nr.: **D4D-7103-00-00**
4D

Produktion: **D4D-7103-00-00**

Rev. 1

Rev. 2

Rev. 3

Rev. 4

Rev. 5

Rev. 6

Rev. 7

Rev. 8

Rev. 9

Rev. 10

Rev. 11

Rev. 12

Rev. 13

Rev. 14

Rev. 15

Rev. 16

Rev. 17

Rev. 18

Rev. 19

Rev. 20

Rev. 21

Rev. 22

Rev. 23

Rev. 24

Rev. 25

Rev. 26

Rev. 27

Rev. 28

Rev. 29

Rev. 30

Rev. 31

Rev. 32

Rev. 33

Rev. 34

Rev. 35

Rev. 36

Rev. 37

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Rev. 39

Rev. 40

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Rev. 90

Rev. 91

Rev. 92

Rev. 93

Rev. 94

Rev. 95

Rev. 96

Rev. 97

Rev. 98

Rev. 99

Rev. 100

Diamond
Industries GmbH
A-2700 Wiener Neustadt, N. A. 026-Str. 5

Zeichnungs Nr.: **D4D-7306-00-00**

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Rev. 100

Supplement to MSB40-023

I. PACKING LIST

1.1 Content of SB-Kit

(Position numbers taken from drawing D4D-7306-00-00, Rev. „b“)

Pos.	Qty.	Part No.	DAI Article No.	Subject	Dimension
15	2	AN929-6D	60.1610	assembly cap pressured seal flared tube fitting	
16	1	AN815-6D	60.1615	union flared tube	
17	1	AN814-4D	60.1700	plug & bleeder	
18	1	MS28775-012	60.1705	O-Ring	
19	1	-	19.0410	copper ring seal	1.5 x 12 x 16 mm
20	1	RSGU1 18/15	11.1370	alu-rubber clamp	18/15
21	1	RSGU1 22/15	11.0935	alu-rubber clamp	22/15
22	1	DIN 933 M6x20	10.0230	hexagon screw	
23	2	DIN 125 A M6	10.7380	washer	
24	1	DIN 985 M6	10.6570	self locking nut	

1.2 Additional Information

Please note that the material has changed for improvement.

For compliance with the MSB 40-023 please use the material as listed in the table above in conjunction with the drawing D4D-7306-00-00, Rev. „b“