

# MANDATORY SERVICE BULLETIN

## MSB 40-074

## MSB D4-094

## MSB F4-028

### **I TECHNICAL DETAILS**

#### **I.1 Category**

Mandatory.

#### **I.2 Airplanes affected**

Type: DA 40, DA 40 D, DA 40 F  
Serial numbers: 40.006 through 40.009  
40.011 through 40.1071  
40.1073 through 40.1077  
D4.001 through D4.382  
40.DS001 through 40.DS030  
40.FC001 through 40.FC029

NOTE Airplanes converted to DA 40 NG via OSB D4-080 are not affected.

#### **I.3 Date of effectivity**

10-May-2013

#### **I.4 Time of Compliance**

Within the next 2000 hrs since new or since the last Major Structural Inspection from the date of effectivity, but not later than 31-Dec-2022.

#### **I.5 Subject**

Reinforcement of aft main spar.

ATA-Code: 57-00

#### **I.6 Reason**

By further testing and investigation it was discovered that the fatigue strength of the aft main spar in the cabin area does not ensure unlimited lifetime. This Service Bulletin prescribes the reinforcement of the aft main spar to correct this condition. As an additional benefit the reinforcement is the basis for the Major Structural Inspection interval increase to 6000 hrs since new and every 4000 hrs thereafter.

#### **I.7 Concurrent Documents**

None.

**I.8 Approval**

The technical information or instructions contained in this document relate to the Design Change Advisories No. MÄM 40-398 and MÄM 40-475, which have been approved under the authority of EASA Design Organization Approval ref. EASA.21J.052.

The technical content of this document has been approved under the authority of DOA ref. EASA.21J.052.

**I.9 Accomplishments / Instructions**

Comply with WI-MSB 40-074 / WI-MSB D4-094 / WI-MSB F4-028, latest effective issue.

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

Not affected.

**II PLANNING INFORMATION****II.1 Material and Availability**

See WI-MSB 40-074 / WI-MSB D4-094 / WI-MSB F4-028, latest effective issue.

Materials including drawings are available from Diamond Aircraft Industries.

**II.2 Special Tools**

None.

**II.3 Labour Effort**

Approx. 4 hours.

**II.4 Credit**

None.

**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 log book.
4. In case of doubt contact Diamond Aircraft Industries GmbH.



Diamond Aircraft Industries GmbH  
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Austria

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10-May-2013

**EXECUTION REPORT TO  
SERVICE BULLETIN  
MSB 40-074  
MSB D4-094  
MSB F4-028**

AIRPLANE DATA

Airplane Serial Number \_\_\_\_\_  
Airplane Registration \_\_\_\_\_  
Airplane Operator \_\_\_\_\_  
Hours of operation of airplane \_\_\_\_\_  
No. of landings \_\_\_\_\_  
Hours of operation-engine \_\_\_\_\_  
Typical operation of airplane private, club, training, other \_\_\_\_\_

\_\_\_\_\_  
Date, Name, Sign

Please fax the completed form to Fax No. +43-2622-26700-1369 or e-mail to  
airworthiness@diamond-air.at

# WORK INSTRUCTION

## WI-MSB 40-074

## WI-MSB D4-094

## WI-MSB F4-028

## **I GENERAL INFORMATION**

### **I.1 Subject**

Reinforcement of aft main spar.

### **I.2 Reference Documents**

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

### **I.3 Remarks**

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

## **II DRAWINGS, SPECIAL TOOLS & MATERIALS**

### **II.1 Drawings**

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### **II.2 Special Tools**

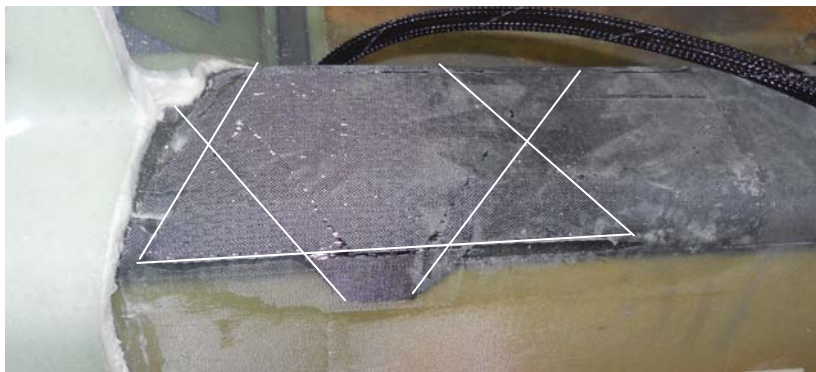
None.

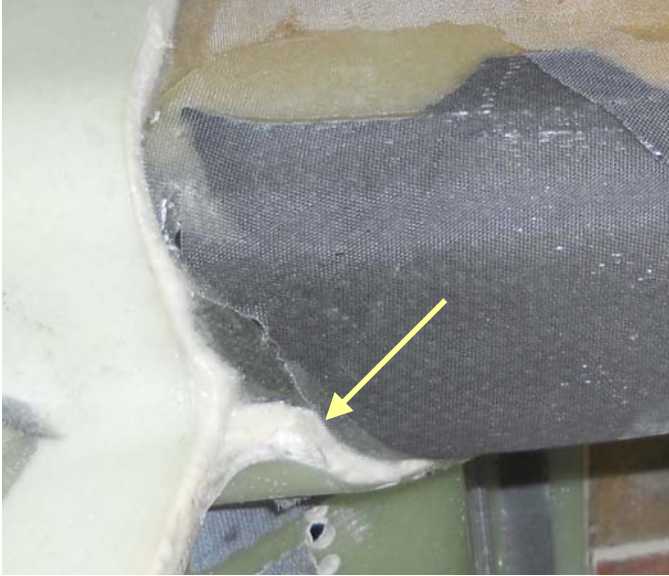
### II.3 Material

Quantity	Part Number	Description
2 m	KDU 1034	SGL UD Carbon Fiber Tape
a/r	LR 285	EPIKOTE™ Resin MGS® LR285
a/r	LH 286	EPIKURE™ Curing Agent MGS® LH286

Material including drawing is available from Diamond Aircraft Industries.

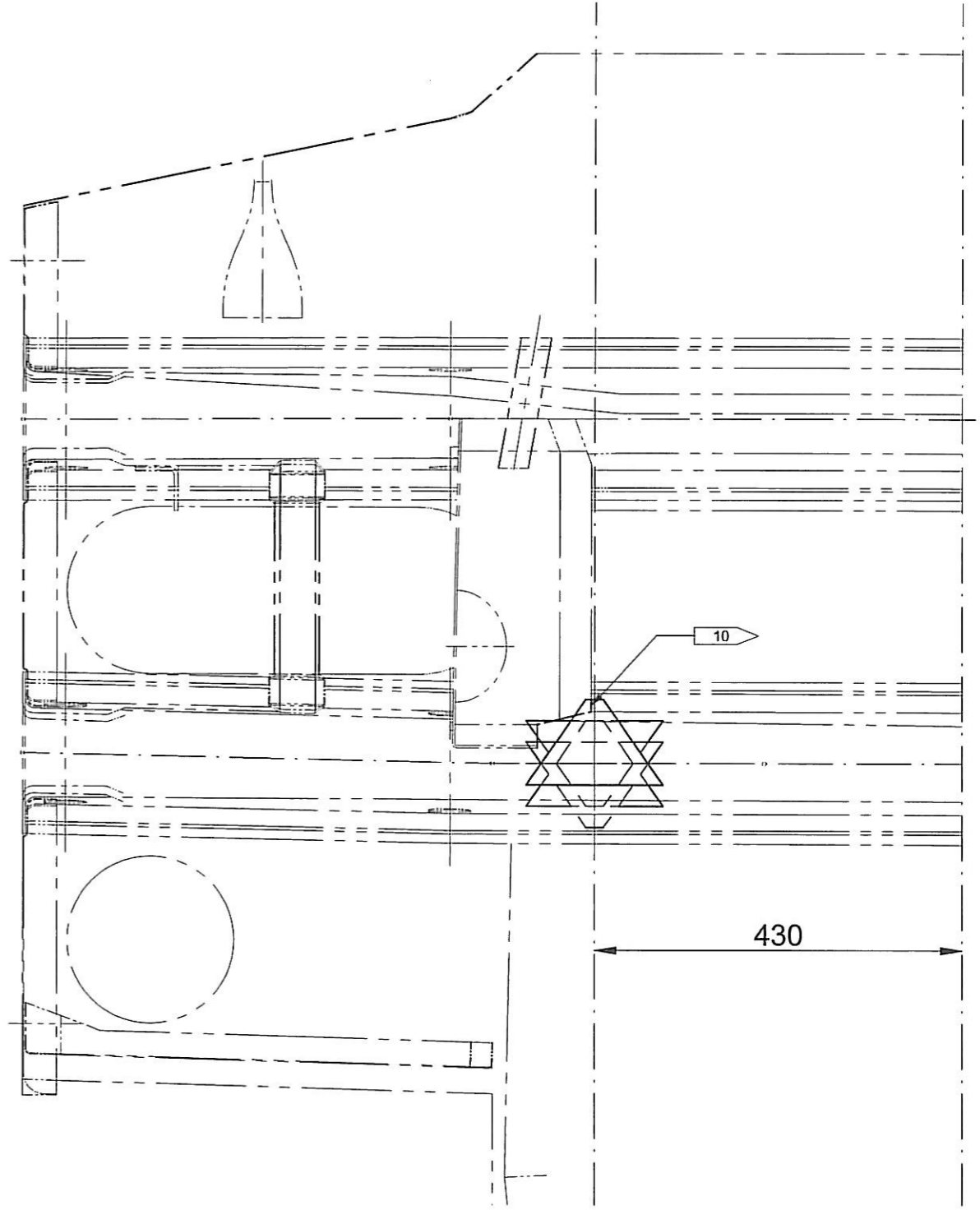
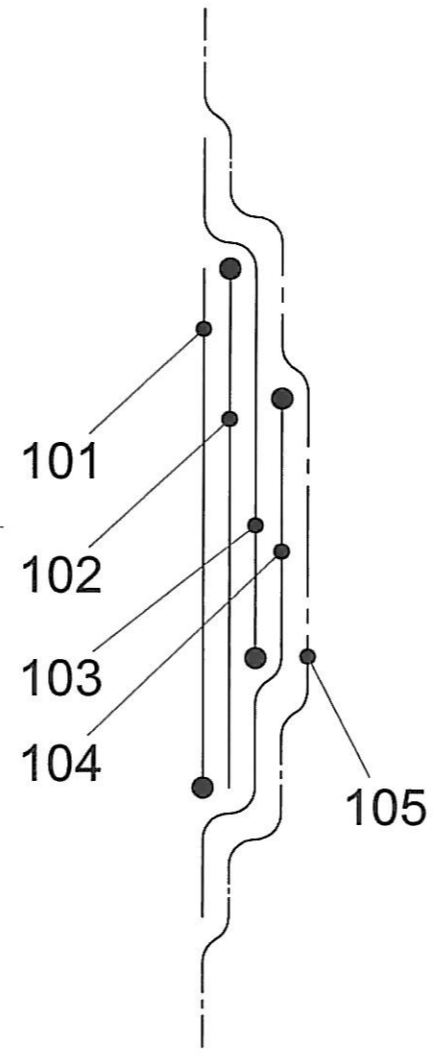
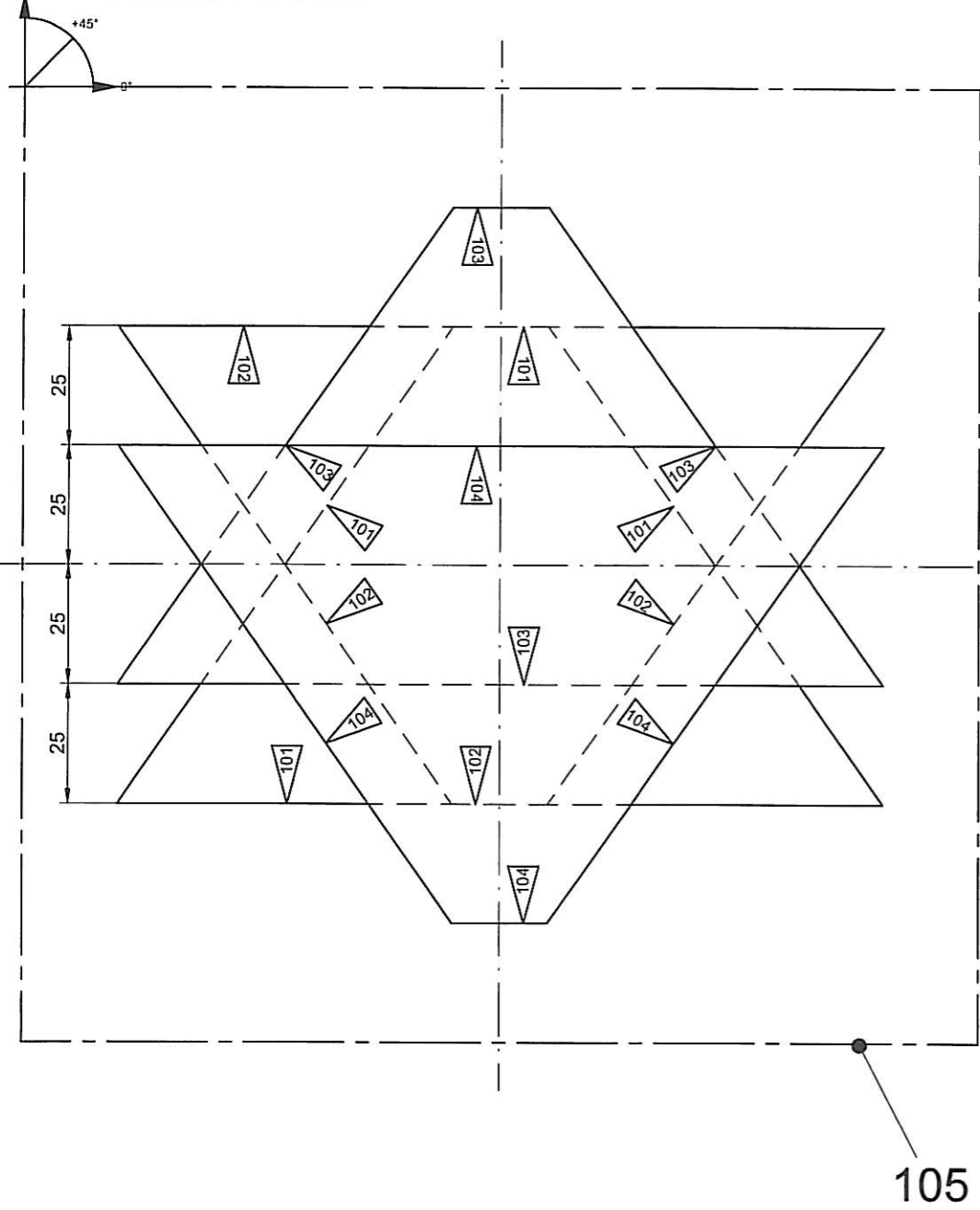
## III INSTRUCTIONS

1	Remove rear seat bench i.a.w. AMM Section 25-10.
2	Remove carpets in rear floor panel.
3	Prepare bonding area i.a.w. AMM Section 51-20.  <b>CAUTION Do not damage the laminate.</b>
4	Prepare LH and RH reinforcement patch i.a.w. drawing D41-5313-03-00_2: Place impregnated reinforcement patches (items 101 to 104) on a PE or PP carrier foil.
5	Put LH and RH reinforcement patch in place on aft main spar i.a.w. drawing D41-5313-03-00_2.  

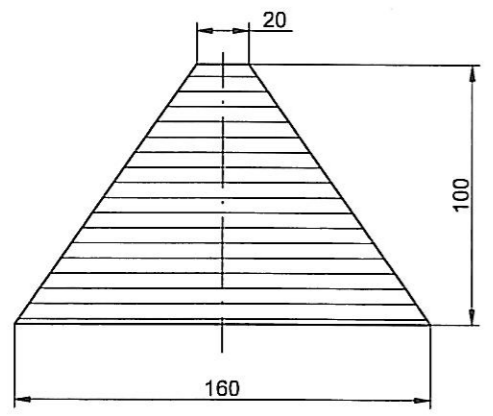
6	<p>Where the reinforcement patches overlap parts other than the aft main spar, trim the reinforcement patch (max cut off 60 mm).</p> 
7	Cover the patches with peel ply.
8	Cure and post cure i.a.w. AMM Section 51-20.
9	Remove peel ply.
10	Install carpets in rear floor panel.
11	Install rear seat bench i.a.w. AMM Section 25-10.
12	Clean working areas, check for foreign objects.
13	Check all altered, replaced and repaired parts for improper function.
14	Test all systems in working area for function.
15	Record MÄM 40-398 as installed.
16	Make all necessary entries in the airplane logs.

REVISIONS	
Rev.	Description
1	New drawing, supersedes D41-5313-03-00_1.

### PATCH LAYUP



### DRAWING FOR BLANK



#### NOTES

10 TRIM PATCH TO INBOARD EDGE OF ITEM 17 TO AVOID STEP IN PATCH

Pos.	QTYL	QTYR	Part Number	Description	Specification	Supplier
105	-	-	PA-20-63 LN 98690	Peel Ply	200x200	
104	1	1	KDU 1034	UD Carbon Fiber	0°, shown on Drawing	Fa. Sigr
103	1	1	KDU 1034	UD Carbon Fiber	0°, shown on Drawing	Fa. Sigr
102	1	1	KDU 1034	UD Carbon Fiber	0°, shown on Drawing	Fa. Sigr
101	1	1	KDU 1034	UD Carbon Fiber	0°, shown on Drawing	Fa. Sigr

Approved: <i>Jutte</i> Date: 14. DEZ 2009	Checked: <i>SHITZER</i> Date: 10.12.09	General Tolerance: ISO 2768 medium	Scale:
Next Higher Assembly: D41-5310-00-03		Title: <b>Center Part Lower Assy</b>	
MAM 40-398 10.12.09 M. Scheikl		Drawing Number: <b>D41-5313-03-00_2</b>	
Saved under: D41-5313-03-00_2.dft		Sheet 3 from 3	

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