

# MANDATORY SERVICE BULLETIN

## NO. MSB-42-043/1

### Supersedes MSB 42-043

#### I TECHNICAL DETAILS

##### I.1 Category

Mandatory

##### I.2 Airplanes Affected

Type: DA 42, DA 42 M

Serial Numbers: 42.006 through 42.285, 42.287, 42.289 through 42.291, 42.295, 42.297, 42.301, 42.302, 42.306 through 42.308  
42.AC001 through 42.AC110

##### I.3 Date of Effectivity

14-Feb-2008

##### I.4 Time of Compliance

At next 200 hours inspection from the date of effectivity, but not later than 30-Sep-2008.

##### I.5 Subject

Replacement of aileron bellcrank located in the wing, with a bellcrank that allows for additional angular movement of the push rod, and replacement of a bent rod end.

##### I.6 Reason

Rod ends in the aileron control system were slightly bent to achieve clearance. This non-preferable practice became obsolete, since a new design of the aileron bellcrank is available. This service bulletin calls for replacement of the bent rod end and the installation of the new design aileron bellcrank.

**I.7 Concurrent Documents**

None.

**I.8 Approval**

The technical information or instructions contained in this document relate to the Design Change Advisory No. MÄM 42-241/c, which has been approved under the authority of EASA Design Organization Approval No. EASA.21J.052.

The technical content of this document has been approved und the authority of DOA No. EASA.21J.052.

**I.9 Accomplishment/Instructions**

WI-MSB-42-043, latest effective issue must be complied with.

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

Negligible.

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

WI-MSB-42-043 is attached to this Service Bulletin.  
All Material is available through Diamond Aircraft.

**II.2 Special Tools**

None.

**II.3 Credit**

All parts listed in WI-MSB-42-043 and 3.0 hours of labor.

**II.4 Labor Effort**

3.0 hours of work for both sides.

## **II.5 Reference Documents**

Diamond Aircraft DA 42 Airplane Maintenance Manual, Doc. No. 7.02.01, latest effective issue.

## **III REMARKS**

1. All measures must be carried out by a certified aircraft station or a certified aircraft mechanic.
2. Accomplishment of the measures must be confirmed in the log book.
3. In case of any doubt, contact Diamond Aircraft Industries.
4. If material and labor hours are subject to be credited through Diamond Aircraft Industries, the SB must be carried out by an authorized Diamond Service Center and the Warranty Application must be sent not later than 31-Oct-2008.

## EXECUTION REPORT

for MSB 42-043/1

### AIRPLANE DATA

Airplane Serial Number: \_\_\_\_\_

Airplane Registration: \_\_\_\_\_

Airplane Operator: \_\_\_\_\_

Hours of operation of airplane: \_\_\_\_\_

No. of landings: \_\_\_\_\_

Hours of operation-engine LH: \_\_\_\_\_

RH: \_\_\_\_\_

Typical operation of airplane: private, club, training, other \_\_\_\_\_

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Date, Name, Sign

Please fax the completed form to Fax No. \*\*43-2622-26700-369 or e-mail to  
airworthiness@diamond-air.at

# WORK INSTRUCTION

## WI-MSB-42-043

### „Replacement of aileron bellcrank in the wing“

#### **I GENERAL INFORMATION**

##### **I.1 Subject:**

Replacement of aileron bellcrank located in the wing, with a bellcrank that allows for additional angular movement of the push rod, and replacement of a bent rod end.

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

Diamond Aircraft DA 42 Airplane Maintenance Manual, Doc. No. 7.02.01, latest effective issue.

##### **I.3 Remarks:**

- a) The work must be carried out by a certified aircraft service station or a certified aircraft maintenance mechanic. In case of doubt, contact Diamond Aircraft.
- b) All works, particular those that are not especially described in this work instruction, must be carried out in accordance with the referenced maintenance manual.

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

##### **II.1 Drawings:**

D60-2717-00-00

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

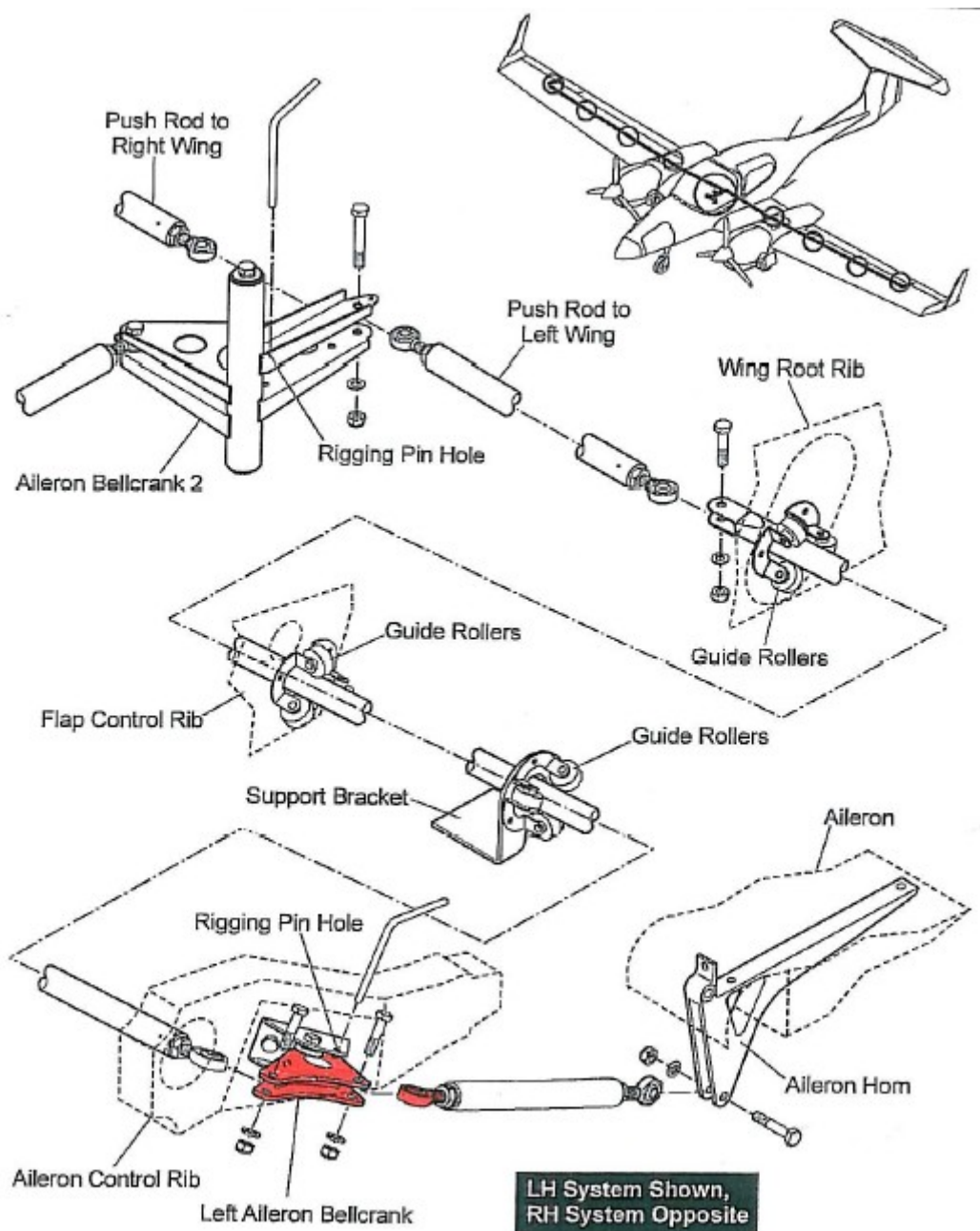
None.

**II.3 Material:**

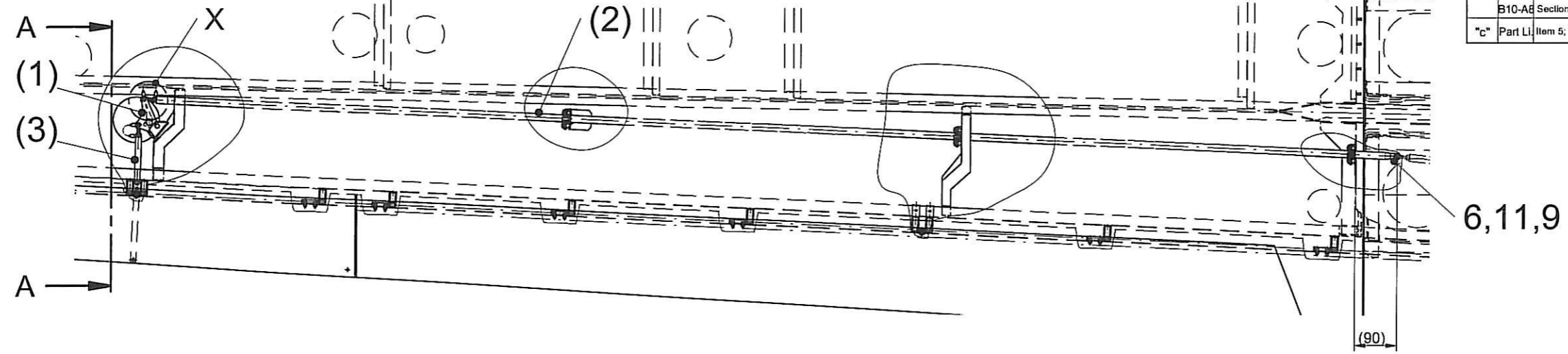
Qty	Description	Part Number
2	Bell Crank Aileron Wing Assy	DA4-2717-50-00_01
2	Bonding Sheet 1	DA4-2717-00-01_01
2	Rod end	DAI-9027-00-01
4	Bolt	LN 9037-M6x32
6	Self-locking nut M6	DIN 985-M6-A2

**III INSTRUCTIONS**

1.	Disconnect/Remove aileron push rods from the bellcrank.
2.	Record adjusted length of the short pushrod (from the aileron bellcrank to the aileron horn).
3.	Replace aileron bellcrank, refer to AMM section 27-00-00. <b>NOTE:</b> Keep bolt and washers, replace self-locking nut.
4.	Replace bent rod end (eye-end fitting with spherical bearing) and adjust to correct length, refer to AMM section 27-00-00. <b>CAUTION:</b> The thread of the rod end must be in safety.
5.	Install Bonding Sheet and reconnect/reinstall the push rods to the bellcrank using the LN 9037-M6x32 bolts and a new self-locking nuts. Refer to drawing D60-2717-00-00 and AMM section 27-10-00.
6.	Clean working area and check for foreign objects.
7.	Repeat items 1 to 6 on the other wing.
8.	Perform aileron system test procedure, refer to AMM section 27-10-00.
9.	Test all systems in working area for function.
10.	Make necessary entries into aircraft log.

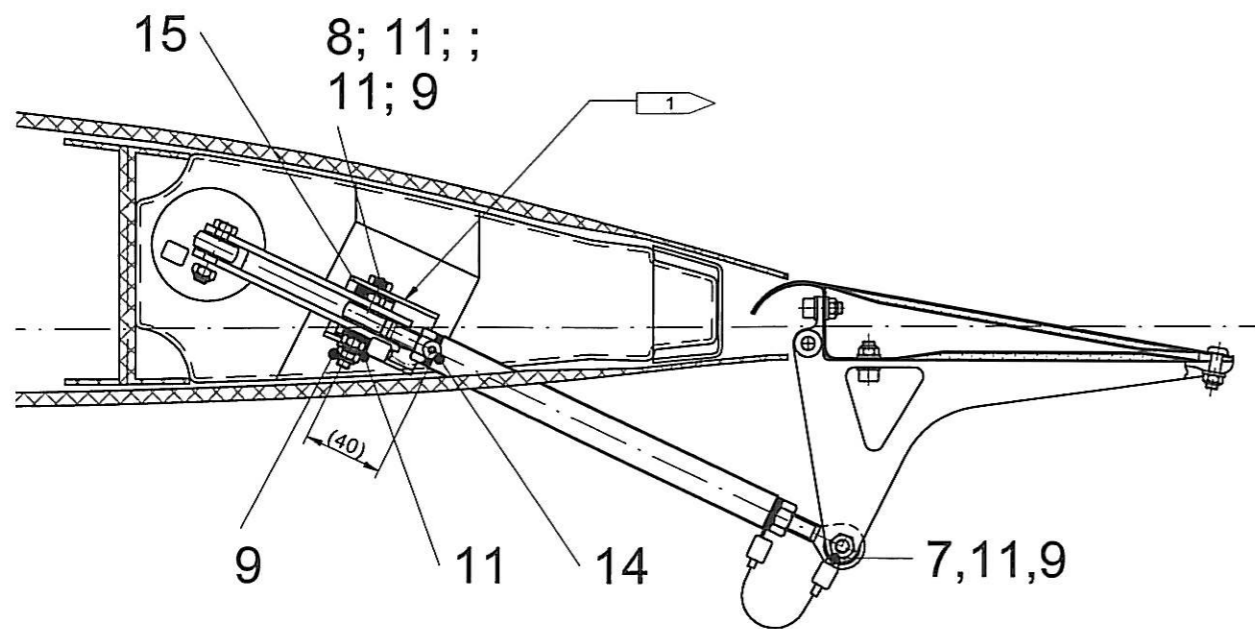


**Figure 1:** Aileron Controls in the Wing (colored items are affected by this SB)

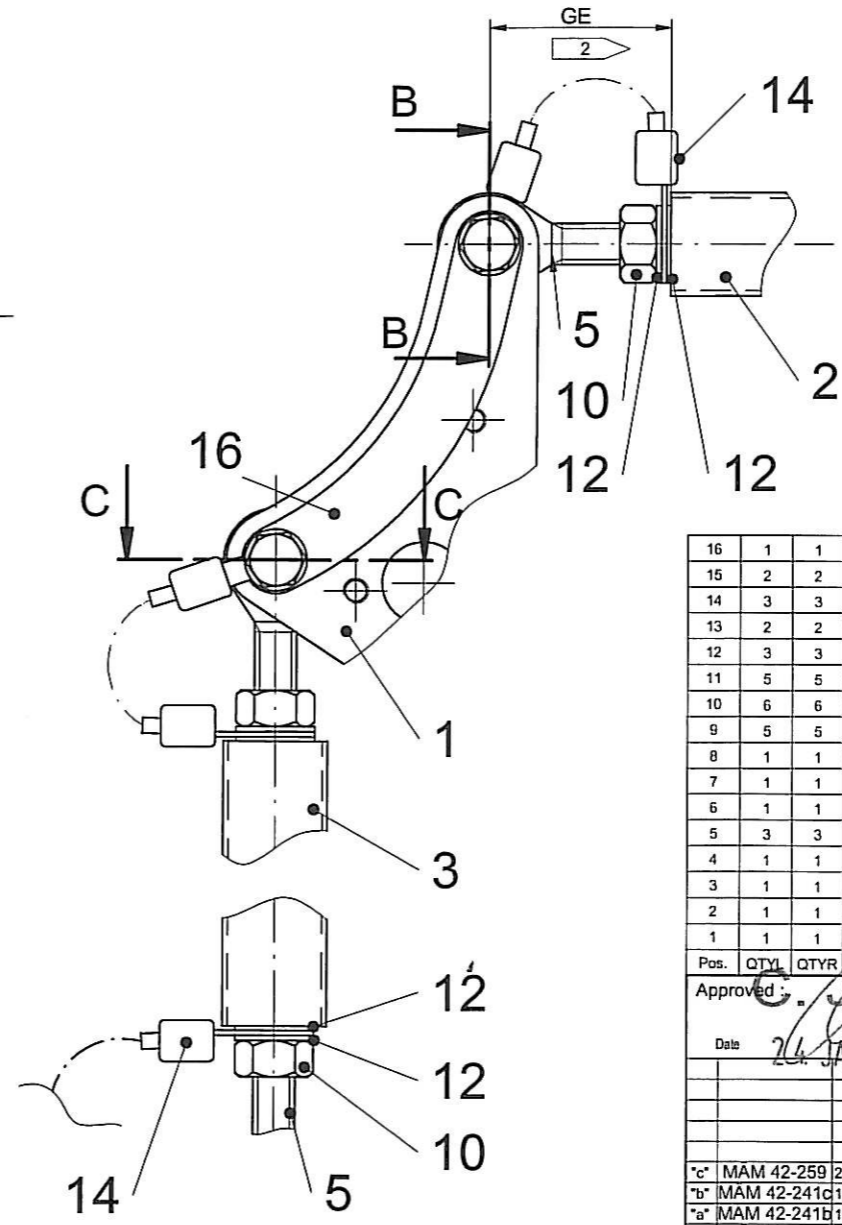


REVISIONS		
Rev.	Zone	Description
"a"	-	New drawing, does not supersede another drawing.
"a"	-	Pos. 9; DIN 985-M6-zincd changed to DIN 985-M6-A2 Pos. 10; DIN 934-M8-zincd changed to DIN 934-M8-A2 Pos. 11; DIN 125A-6,4-zincd changed to DIN 125A-6,4-A2 Pos. 16; DA4-2717-00-01_01 new added Drawing new organized.
"b"	C6-C5	Section B-B renamed to Section C-C
"b"	B10-A6	Section C-C new added.
"c"	Part LI	Item 5; DA1-9072-00-01 corrected to DA1-9027-00-01

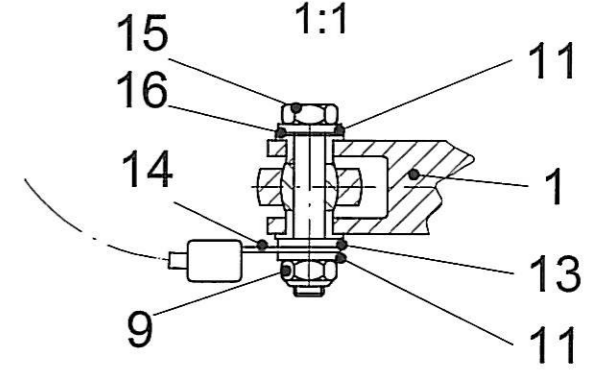
Section A-A  
1:2



Detail X  
1:1



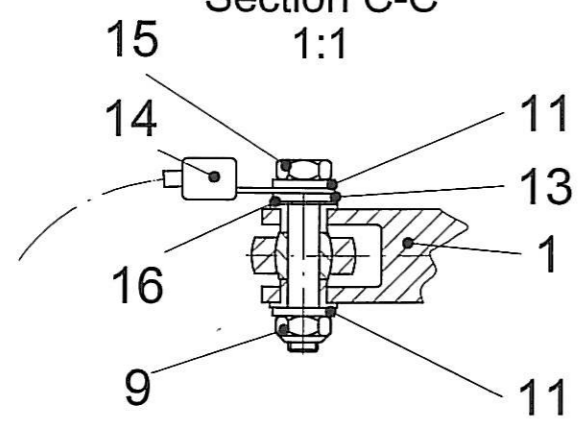
Section B-B  
1:1



Notes:

- 1 Rigging hole for zero position
- 2 GE-initial position if not specified otherwise 35mm

Section C-C  
1:1



Pos.	QTY	QTYR	Part Number	Description	Specification	Supplier
16	1	1	DA4-2717-00-01_01	Bonding Sheet 1		
15	2	2	LN 9037-M6x32	Hexagon screw		
14	3	3	BW1-B14-RB8-RB6-100	Bonding wire assy		
13	2	2	DIN 6797J-6,3-zincd	Lock washer		
12	3	3	DIN 6797J-8,4-zincd	Lock washer		
11	5	5	DIN 125A-6,4-A2	Washer		
10	6	6	DIN 934-M8-A2	Hexagon nut		
9	5	5	DIN 985-M6-A2	Self-locking nut		
8	1	1	LN 9037-M6x42	Hexagon screw		
7	1	1	LN 9037-M6x26	Hexagon screw		
6	1	1	LN 9037-M6x22	Hexagon screw		
5	3	3	DA1-9027-00-01	Head of joint rod		Hirschmann/Askubal
4	1	1	ST1-6-0245-C	DS Distance bush 1		
3	1	1	PR1-16x0,5-0170-D	DS Push rod 1		
2	1	1	PR2-20x0,5-8-6-3430-D	DS Push rod 2		
1	1	1	DA4-2717-50-00_01	Aileron bell crank wings		

Approved: *[Signature]* Date: 24 JAN 2008

Checked: *[Signature]* Date: 24 JAN 2008

Next Higher Assembly: *[Signature]*

General Tolerance: ISO 2768 medium

Scale: 1:10

Title: **Aileron Control Wing Assy**

Diamond AIRCRAFT Industries GmbH

DA 42 Twin Star

Drawing Number: **D60-2717-00-00**

Sheet 1 from 1

Rev. Change Date Name Saved under: **D60-2717-00-00c.dft**