

MANDATORY SERVICE BULLETIN

MSB 42-126/1

MSB 42NG-066/1

SUPERSEDES MSB 42-126 and MSB 42NG-066

I TECHNICAL DETAILS

I.1 Category

Mandatory.

I.2 Airplanes affected

Type: DA 42 /M /NG /M-NG
Serial numbers: 42.004 through 42.427,
42.AC001 through 42.AC151
42.M001 through 42.M026
42.N001 through 42.N067
42.N100 through 42.N129
42.NC001 through 42.NC008
42.MN001 through 42.MN033

I.3 Date of effectivity

14-Nov-2019

I.4 Time of Compliance

Initial inspection:

- For airplanes with more than 500 flight hours within 100 flight hours or within 6 months from the date of effectivity, whichever is reached first.
- For airplanes with 500 flight hours or less before exceeding 600 flight hours.

Recurring inspection:

For airplanes with flap bell crank D60-2757-11-00 revision "e" or "f" installed, following the initial inspection, every 200 flight hours thereafter.

Note: The installation of the improved flap bell crank D60-2757-11-00_01 is the terminating action for the recurring inspection.

I.5 Subject

Inspection of flap bell crank for cracks, installation of two spacers instead of one long spacer and replacement of early revisions of the affected flap bell crank.

ATA-Code: 27-50

I.6 Reason

DAI has received reports of crack formation on the flap bell crank D60-2757-11-00, which if not detected can lead to failure of the flap bell crank. In order to detect these crack formations Diamond Aircraft Industries prescribes to examine the flap bell crank and if necessary to replace it with an improved flap bell crank D60-2757-11-00_01. Furthermore, this Service Bulletin prescribes the installation of 2 spacers where the flap actuator rod end bearing is connected to the flap bell crank.

Revision 1:

For airplanes with early flap bell crank design D60-2757-11-00 up to revision "d", this revision of MSB 42-126 / MSB 42NG-066 instructs to replace it with the improved flap bell crank D60-2757-11-00_01, which also constitutes the terminating action for the recurring inspection.

I.7 Concurrent Documents

None.

I.8 Approval

The technical information or instructions contained in this document relate to Design Change Advisories No. MÄM 42-772/b and MÄM 42-1007, 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 42-126 / WI-MSB 42NG-066, latest effective issue.

I.10 Mass (Weight) and CG

Mass and Center of Gravity are not affected.

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

See WI-MSB 42-126 / WI-MSB 42NG-066, latest effective issue.

II.2 Special Tools

None.

II.3 Labour Effort

Initial inspection: approx. 4 hours.

Recurring inspection during scheduled inspection: approx. 2 hours.

II.4 Credit

For all AC within warranty period.

II.5 Reference Documents

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

DA 42 NG Airplane Maintenance Manual, Doc. No. 7.02.15, 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, 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. If material and/or labor hours are subject to be credited through Diamond Aircraft Industries, the Service Bulletin must be done by an authorized Diamond Service Center within the time of compliance and the Warranty Application incl. Work Report must be sent not later than 30 days after completion of work.
5. In case of doubt contact Diamond Aircraft Industries GmbH.

**EXECUTION REPORT TO
SERVICE BULLETIN
MSB 42-126/1
MSB 42NG-066/1**

AIRPLANE INFORMATION

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, SignPlease e-mail the execution report to executionreports@diamond-air.at

WORK INSTRUCTION

WI-MSB 42-126

WI-MSB 42NG-066

I GENERAL INFORMATION

I.1 Subject

Inspection for cracks of the flap bell crank or replacement.

I.2 Reference Documents

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

DA 42 NG Airplane Maintenance Manual, Doc. No. 7.02.15, 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

None.

II.2 Special Tools

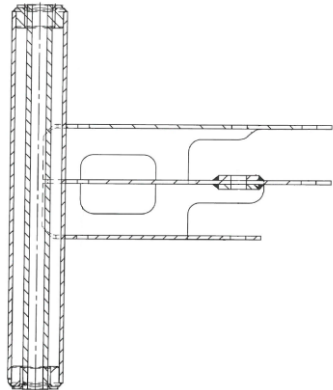
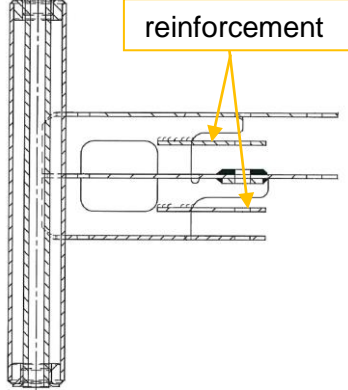
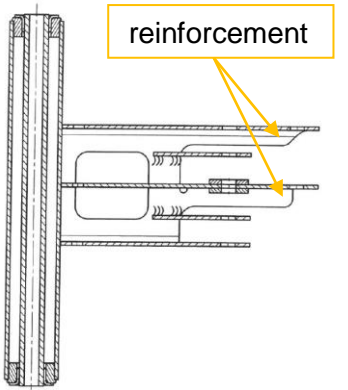
None.

II.3 Material

Quantity	Part Number	Description
2*	DS BU2-10-06-0065-C	Spacer
a/r	D60-2757-11-00_01	Flap Bell Crank Center Wing

*) Only needed for first time installation of the two spacers.
Material is available from Diamond Aircraft Industries.

III INSTRUCTIONS

1	Make sure that the Electric Master Switch is switched OFF and pull the flap circuit breaker.
2	Remove the passenger seat in accordance with AMM, section 25-10.
3	Disconnect the flap actuator rod end bearing from the flap bell crank in accordance with AMM, section 27-50.
4	Disconnect the 4 flap pushrods from the flap bell crank.
5	<p>Check which flap bell crank design is installed to the airplane.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>A)</p>  <p>D60-2757-11-00 up to Revision "d"</p> </div> <div style="text-align: center;"> <p>B)</p>  <p>D60-2757-11-00 Revisions "e" and "f"</p> </div> <div style="text-align: center;"> <p>C)</p>  <p>D60-2757-11-00_01</p> </div> </div>

If flap bell crank D60-2757-11-00 revision "e" or "f" is installed:

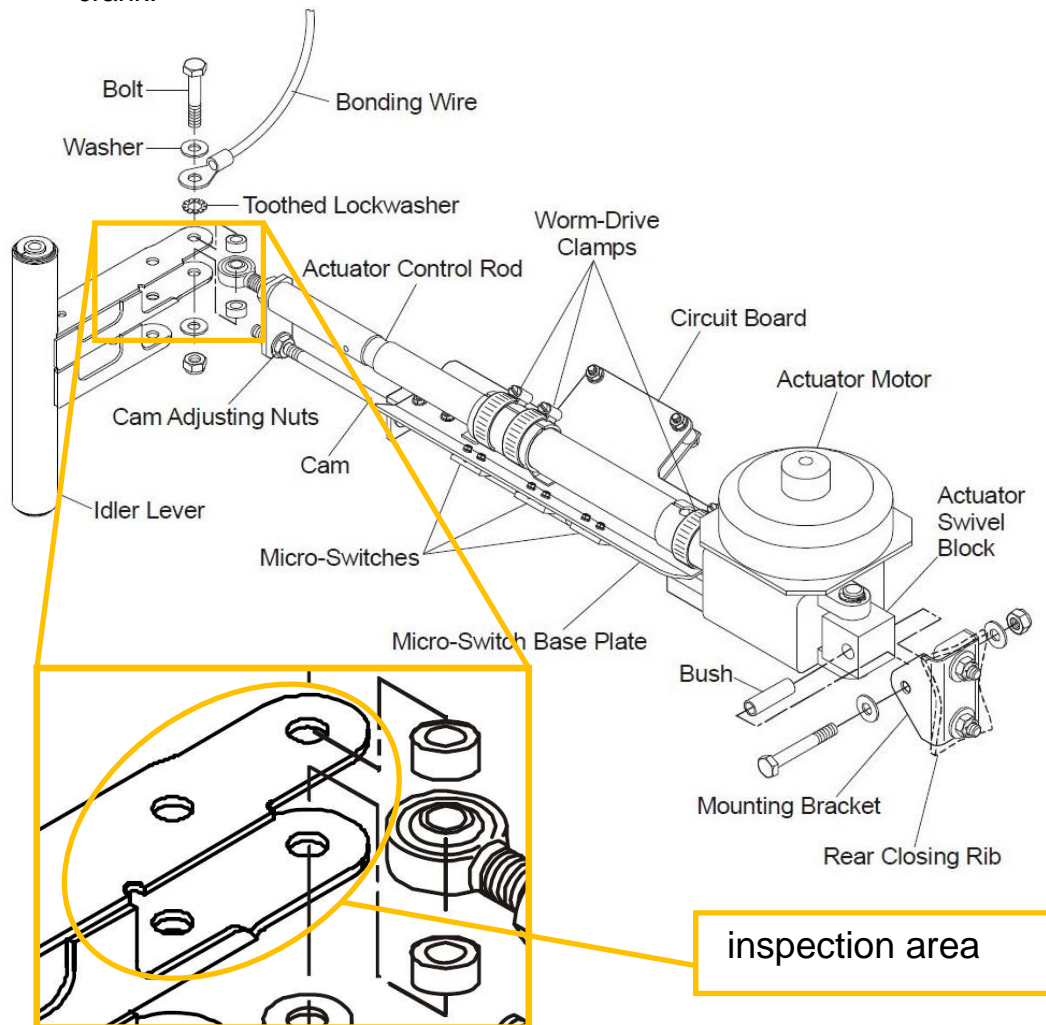
- Examine the flap bell crank for cracks and deformation in the area where the flap pushrods are attached to the flap bell crank as shown in the figure below.
- If cracks or deformation are found, replace the flap bell crank with the improved flap bell crank D60-2757-11-00_01 in accordance with AMM, Section 27-50.

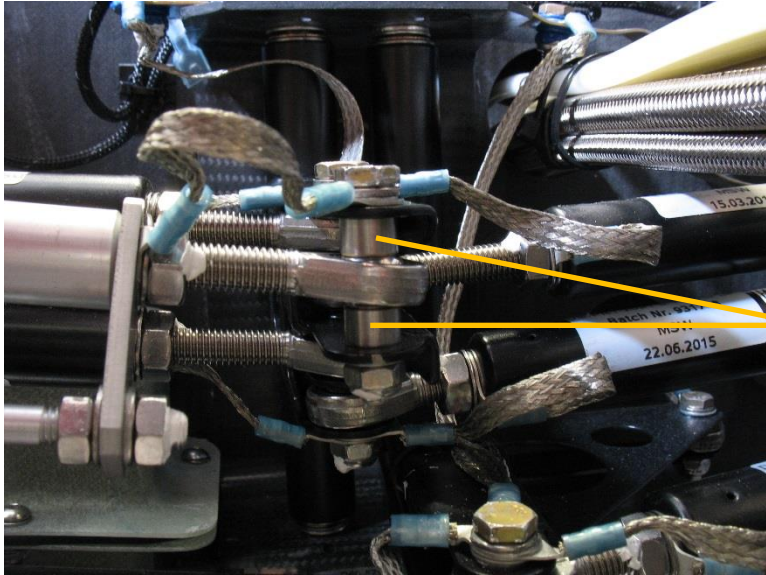
Note: In case of doubt remove the powder coating and carry out dye penetration method to identify possible cracks.

Note: Apply epoxy based zinc phosphate primer and commercial grade 2K PU lacquer to areas where the powder coating has been removed or has been damaged.

Note: In case the flap bell crank must be replaced, if necessary, remove the aileron push rods from the aileron bell crank and remove the aileron bell crank to gain better access for removing the flap bell crank. Re-install aileron bell crank and aileron push rods after replacement of flap bell crank.

6



7	<p>If flap bell crank D60-2757-11-00 up to revision “d” is installed:</p> <ul style="list-style-type: none"> Replace the flap bell crank with the improved flap bell crank design D60-2757-11-00_01 in accordance with AMM, Section 27-50. <p>Note: Flap bell crank P/N D60-2757-11-00 up to Rev. “d” was installed in the following airplanes:</p> <p style="padding-left: 40px;">42.004 through 42.082, 42.107, 42.109 through 42.113, 42.AC001 through 42.AC006</p> <p>Note: If necessary, remove the aileron push rods from the aileron bell crank and remove the aileron bell crank to gain better access for removing the flap bell crank. Re-install aileron bell crank and aileron push rods after replacement of flap bell crank.</p>
8	<p>Install the 4 flap pushrods to the flap bell crank.</p>
9	<p>Install the flap actuator to the flap bell crank in accordance with AMM, section 27-50:</p> <ul style="list-style-type: none"> Position the flap actuator rod end bearing between the two spacers DS BU2-10-06-0065-C, which are installed as a replacement for the long single spacer, as shown in the picture below. 
10	<p>Clean working area, check for foreign objects.</p>
11	<p>Reset the flap circuit breaker.</p>
12	<p>Check all altered, replaced, repaired parts for proper function.</p>
13	<p>Install the passenger seat in accordance with AMM, section 25-10.</p>
14	<p>Test all systems in working area for function.</p>
15	<p>Make all necessary entries in the airplane logs.</p>