

RECOMMENDED SERVICE BULLETIN

RSB 40-083

RSB D4-105

RSB 40NG-053

I TECHNICAL DETAILS

I.1 Category

Recommended

I.2 Airplanes affected

Type: DA 40 /D /NG
Serial numbers: 40.080, 40.084
D4.191 through D4.399
40.DS001 and through 40.DS175
40.561 through 40.1206
40.N001 through 40.N310

All aircraft to which a replacement passenger door or replacement canopy has been installed that has an aluminum door locking mechanism having P/N D41-5211-60-00_2 which is installed to canopies having P/N D41-5210-00-00X02 and passenger doors having P/Ns DA4-5221-00-00_2 or DA4-5221-00-00_3.

I.3 Date of effectivity

19-Jun-2017

I.4 Time of Compliance

Within 200 flight hours or within 1 year from the date of effectivity, whichever is reached first.

I.5 Subject

Replacement of steel pin of door handle mechanism of canopy and passenger door with an improved design.

ATA-Code: 52-00

I.6 Reason

DAI has received 4 reports of failed steel pins that attach the compression gas spring to the door locking mechanism frame.

In order to avoid further steel pin failures Diamond Aircraft Industries recommends replacing the steel pin with a reinforced steel pin design.

I.7 Concurrent Documents

None.

I.8 Approval

The technical information or instructions contained in this document relate to Design Change Advisory No. MÄM 40-834/b, which has 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-RSB 40-083 / WI-RSB D4-105 / WI-RSB 40NG-053, latest effective issue.

I.10 Mass (Weight) and CG

Negligible.

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

See WI-RSB 40-083 / WI-RSB D4-105 / WI-RSB 40NG-053, latest effective issue.

II.2 Special Tools

None.

II.3 Labour Effort

2 hours per door.

II.4 Credit

For all AC within warranty period.

II.5 Reference Documents

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

DA 40 NG Airplane Maintenance Manual, Doc. No. 6.02.15, 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, 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. 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.



Diamond Aircraft Industries GmbH
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**EXECUTION REPORT TO
SERVICE BULLETIN
RSB 40-083
RSB D4-105
RSB 40NG-053**

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

WORK INSTRUCTION

WI-RSB 40-083

WI-RSB D4-105

WI-RSB 40NG-053

I GENERAL INFORMATION

I.1 Subject

Replacement of steel pin of door handle mechanism of canopy and passenger door with an improved design.

I.2 Reference Documents

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

DA 40 NG Airplane Maintenance Manual, Doc. No. 6.02.15, 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 | D41-5211-60-36_03 | steel pin (tie bolt 3) |
| 2 | DIN 125A-5.3-PA | washer |
| 2 | BU2-08-05-132-N1 | distance bush |
| a/r | D41-5211-60-91 | compression gas spring |

Material is available from Diamond Aircraft Industries.

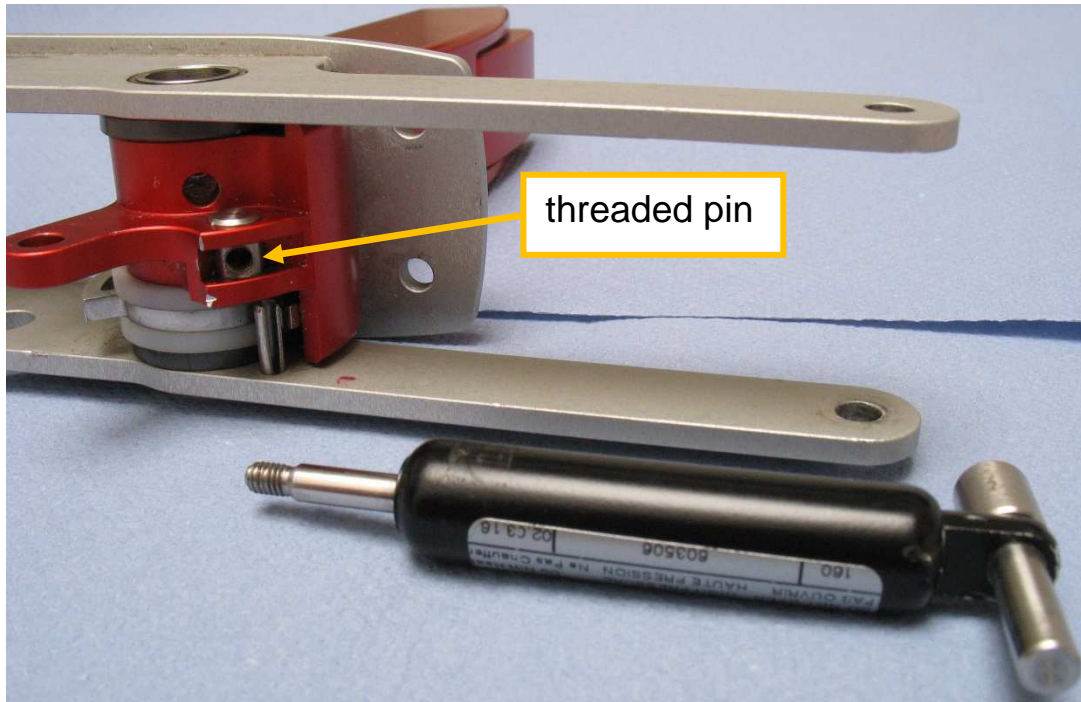
II INSTRUCTIONS

| | |
|---|--|
| 1 | Make sure that AMM-TR-MÄM 40-846 has been incorporated into the AMM. |
| 2 | Test the compression gas spring of the passenger door in accordance with AMM, section 52-10. |
| 3 | Remove the door handle mechanism from the passenger door in accordance with AMM, section 52-10. |
| 4 | Remove the 2 circlips as shown in the pictures blow.  |
| 5 | Remove the steel pin, the polyamide distance bush and the polyamide washer from the door handle mechanism frame. |

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If necessary, replace the compression gas spring of the passenger door handle mechanism:

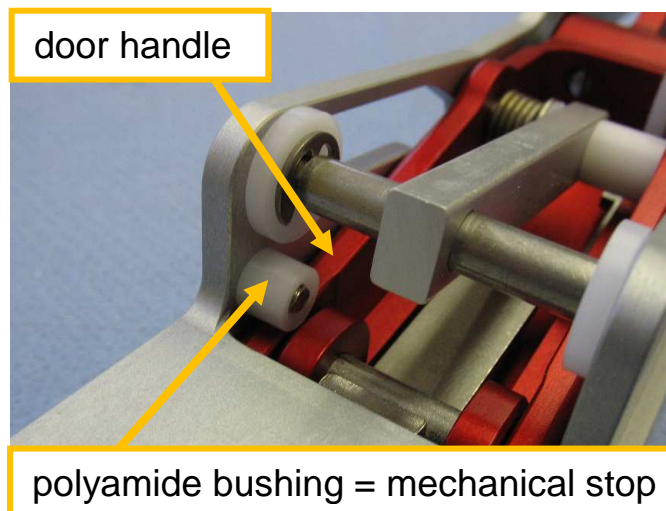
- Unscrew the piston of the compression gas spring from the threaded pin.
- Install the new compression gas spring to the threaded pin.



Note: Secure the thread of the compression gas spring with Loctite 243 when installing the new compression gas spring to the threaded pin.

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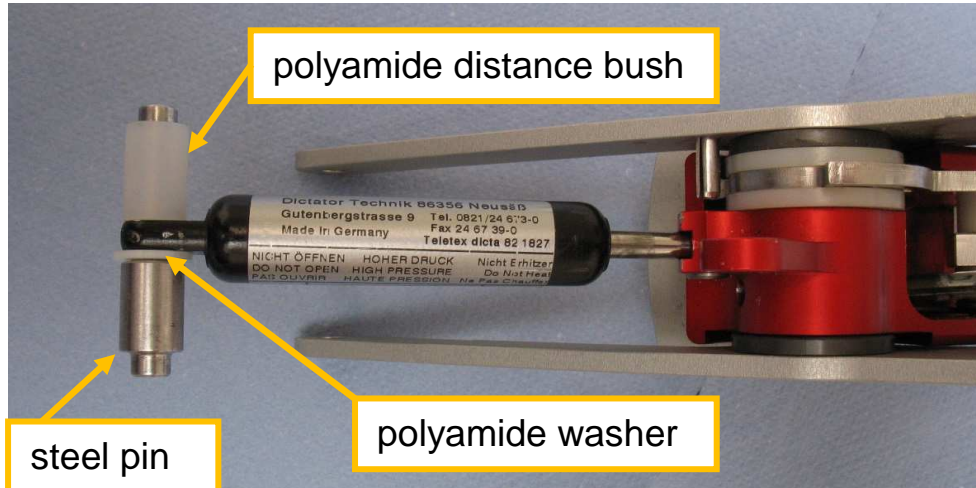
Adjust the length of the compression gas spring. Make sure that the polyamide bushing defines the mechanical stop of the red aluminum door handle as shown in the picture below.



Note: The mechanical stop of the red aluminum door handle must not be defined by the internal stop of the compression gas spring.

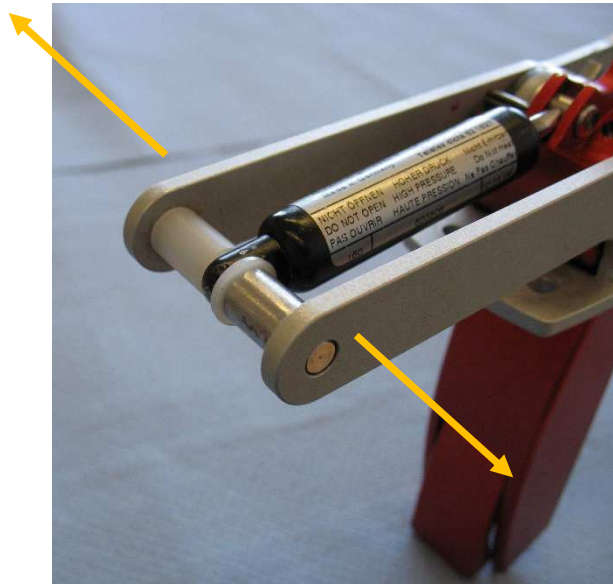
Prepare the new steel pin for installation into the door handle mechanism frame:

- Move the polyamide washer onto the new steel pin.
- Move the steel pin through the eye end of the compression gas spring.
- Move the polyamide distance bush onto the steel pin.



Install the new steel pin with the polyamide washer and the polyamide distance bush to the door handle mechanism frame:

- Move the steel pin into position.
- Carefully bend the side parts of the door handle mechanism frame away from each other as shown by the yellow arrows in the picture below so that the steel pin can snap into the holes of the side parts of the door handle mechanism frame.



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Caution: Bend the side parts of the door handle mechanism frame away from each other only as far as necessary. If the side parts are bent too much and permanently deformed, the whole door handle mechanism must be replaced.

| | |
|----|--|
| 9 | Install the door handle mechanism to the passenger door in accordance with AMM, section 52-10. |
| 10 | Remove the door handle mechanism from the canopy in accordance with AMM, section 52-10. |
| 11 | Perform items 4, 5, 7, 8 and 9 on the door handle mechanism of the canopy. |
| 12 | Install the door handle mechanism of the canopy in accordance with AMM, section 52-10. |
| 13 | Clean working area, check for foreign objects. |
| 14 | Check all altered, replaced, repaired parts for proper function. |
| 15 | Test all systems in working area for function. |
| 16 | Make all necessary entries in the airplane logs. |