

MANDATORY SERVICE BULLETIN

MSB 42-149

MSB 42NG-095

I TECHNICAL DETAILS

I.1 Category

Mandatory

I.1 Airplanes affected

Type: DA 42, DA 42 M, DA 42 NG, DA 42 M-NG

Serial numbers:

- 42.004 and subsequent
- 42.W001 and subsequent
- 42.AC001 and subsequent
- 42.M001 and subsequent
- 42.MW001 and subsequent
- 42.N001 and subsequent
- 42.NC001 and subsequent
- 42.NW002 and subsequent
- 42.N.A.A.001 and subsequent
- 42.MN001 and subsequent
- 42.MNW001 and subsequent

I.2 Date of effectivity

05-Dec-2024

I.3 Time of Compliance

Initial inspection:

At the next scheduled maintenance action from the date of effectivity, latest within the next 50 flight hours, but not later than 31-Jan-2025, whichever comes first.

After 31-Jan-2025 a single flight to a maintenance facility where the initial inspection can be done is permitted. This relocation flight is limited to the minimum required crew under daylight visual meteorological conditions.

Repetitive inspection:

Within 200 ± 10 flight hours, but not later than 12 months ± 30 days after the initial inspection or the last repetitive inspection, whichever comes first.

I.4 Subject

Actions to prevent Passenger Door Separation: Installation of Placards, AFM Procedure update and Inspection/Data Gathering.

ATA-Code: 52-20

I.5 Reason

A large number of passenger door separations have been reported. In some cases it was reported that it was forgotten to latch the passenger door and that there have been attempts to latch the passenger door in flight, which led to separation of the passenger door.

This Service Bulletin implements updated AFM procedures and placards to prevent passenger door separations due to human factors. In addition, a thorough inspection of the passenger door latching and safety hook mechanisms is described. Results of the inspection are to be reported to Diamond Aircraft Industries GmbH to gather fleet data for further investigation.

I.6 Concurrent Documents

None

I.7 Approval

The technical information or instruction contained in this document relate to the Design Change Advisories No. MÄM 42-1333 and MÄM 42-1334, which have been approved under the authority of the DOA ref. EASA.21J.052.

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

I.8 Accomplishments / Instructions

Initial inspection

See WI-MSB 42-149 / WI-MSB 42NG-095 Section III, latest effective issue.

Repetitive inspection

See WI-MSB 42-149 / WI-MSB 42NG-095 Section IV, latest effective issue.

II Mass (Weight) and CG

The change in mass and CG is negligible.

II PLANNING INFORMATION

II.1 Material and Availability

See WI-MSB 42-149 / WI-MSB 42NG-095, latest effective issue.

Note: Placards may be self-fabricated to comply with this MSB.

II.2 Special Tools

None.

II.3 Labour Effort

Initial inspection

Approx. 3 hours in addition to the inspections already required in the AMM.

Repetitive inspection

Approx. 1 hours in addition to the inspections already required in the AMM.

II.4 Credit

For all aircraft 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.

WORK INSTRUCTION

WI-MSB 42-149

WI-MSB 42NG-095

I GENERAL INFORMATION

I.1 Subject

Installation of Passenger Door Placards and Inspection of the Passenger Door System.

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 |
|----------|----------------|--|
| 1* | D60-1133-10-08 | Information Placard – Passenger Door |
| 1* | D60-1133-10-09 | Information Placard – Canopy Handle |
| 1* | D60-1133-10-19 | Information Placard – Canopy Handle (old) |
| 1* | D60-1133-20-60 | Placard – Visual Indicator Passenger Door Handle |
| 1* | D60-1133-20-70 | Placard – Visual Indicator Passenger Door Handle (old) |

* Placard can be fabricated according to Appendix A.

Material is available from Diamond Aircraft Industries.

III INITIAL INSPECTION

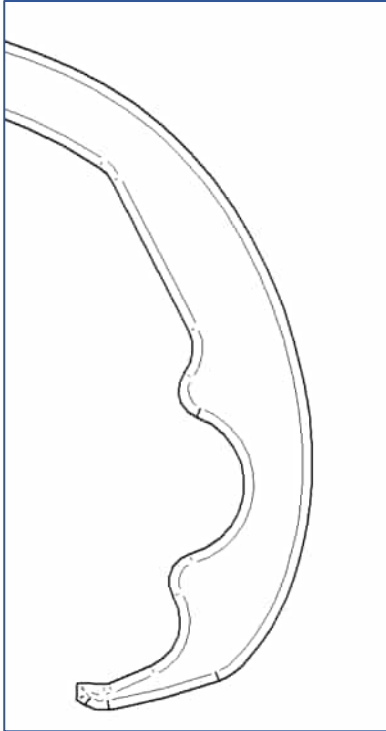
| Inspection | |
|------------|--|
| 1 | Record any findings during the detailed inspections below in addition to the requested information on the execution report in Appendix B. Store any removed parts for later requests by Diamond Aircraft Industries GmbH. |
| 2 | Test the Canopy and Door Warning System i.a.w. AMM Section 52-10. <ul style="list-style-type: none"> • Rectify any findings and repeat this step. • In case of doubt, contact Diamond Aircraft Industries GmbH. • Record any findings on the execution report in Appendix B. |
| 3 | Examine the Carbon Hinges of the Passenger Door i.a.w. AMM Section 52-10. <ul style="list-style-type: none"> • Rectify any findings and repeat this step. • In case of doubt, contact Diamond Aircraft Industries GmbH. • Record any findings on the execution report in Appendix B. |
| 4 | Examine the Door Latching and Safety Hook Mechanisms i.a.w. AMM Section 52-10. <ul style="list-style-type: none"> • Rectify any findings and repeat this step. • In case of doubt, contact Diamond Aircraft Industries GmbH. • Record any findings on the execution report in Appendix B. |

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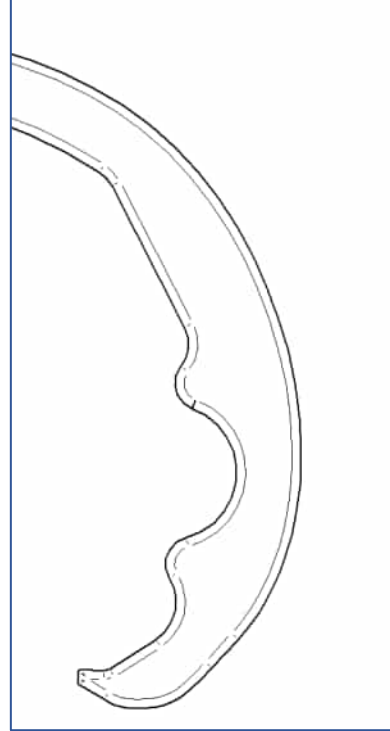
Data collection: Identify the version of the Safety Hook.

- Record the version of the Safety Hook on the execution report in Appendix B.

DA4-5221-00-52_1 (Straight Bottom)



DA4-5221-00-52_03 (Round Bottom)



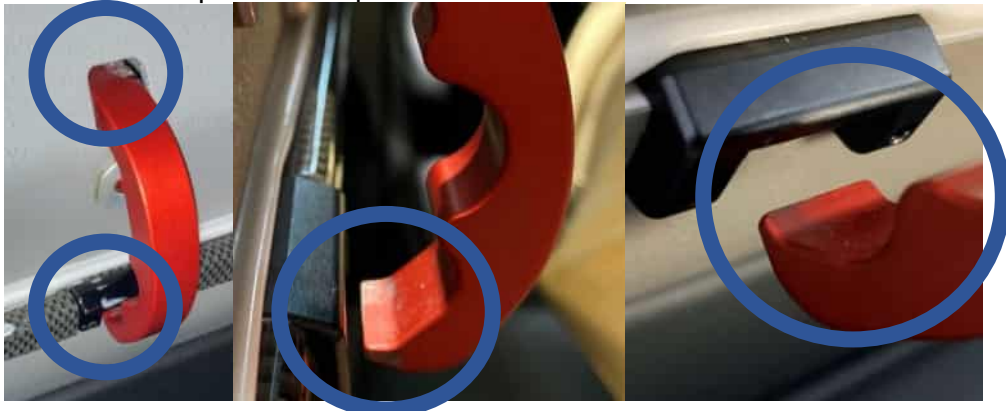
- 6 Examine the Safety Hook for signs of wear, corrosion and poor condition:
- Record the finding on the execution report in Appendix B.
 - There must be no deformation or cracks.
 - Pay particular attention to the contact area of the Actuation Pin.
 - Grooves in the Safety Hook must be less than 2 mm deep.



- Pay particular attention to the hook end of the Safety Hook.
 - The hook end must not be bent.
 - Not acceptable:



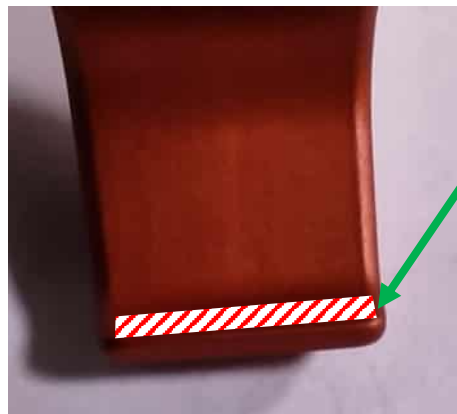
- There must be no corrosion on the contact area to the Retaining Bracket.
- Examples of acceptable conditions:



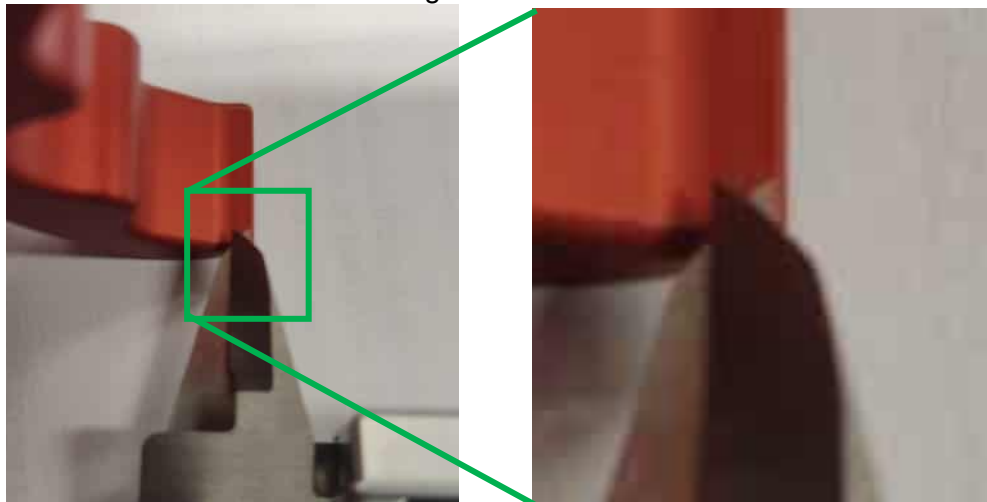
- Examine the tip of the Safety Hook for wear:
 - Wear of edges of Safety Hook:
 - The width of the tip of the Safety Hook must be greater than 10.5 mm.



- The engaging surface of the Safety Hook is the flat surface at the tip of the Safety Hook.
 - It must be free from steps and ridges.
 - Scratches or uniform wear of surface protection are permitted.



- Measure the width of the engaging surface.
 - The width must be greater than 1.5 mm.



- Measure the maximum thickness of the Safety Hook at the location of the engaging surface, perpendicular to the engaging surface.
 - The thickness must be greater than 2.5 mm.
 - The maximum variation of measured thickness over the width of the Safety Hook must be less than 0.2 mm.



- Measure the minimum thickness of the Safety Hook at the location of the engaging surface, perpendicular to the engaging surface.
 - The minimum thickness must be greater than 1.5 mm.
 - The maximum variation of this value over the whole width must be less than 0.2 mm.



- The edge of the engaging section of the Safety Hook that is facing towards the Retaining Bracket must be free from ridges.



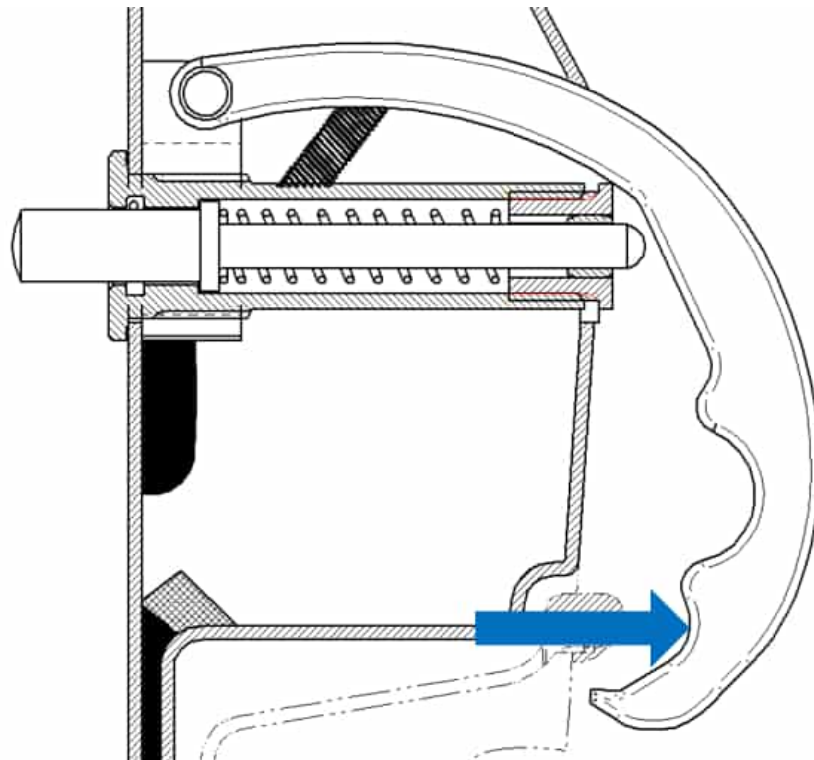
Replace Safety Hook, if

- any of the Safety Hook dimensions measured in this step are not within the given tolerances, or
- corrosion is found, or
- deformation, grooves, ridges or steps.

Record the replacement on the execution report in Appendix B.

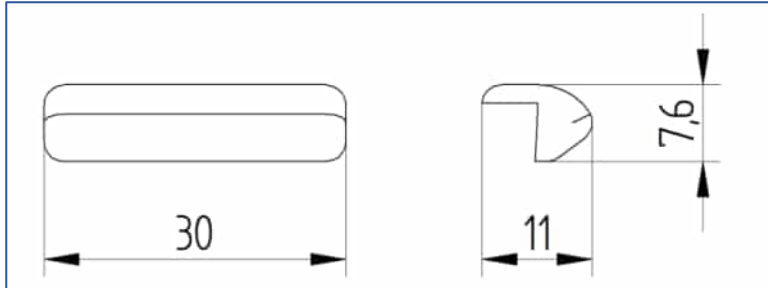
In case of doubt, contact Diamond Aircraft Industries GmbH.

- 7 Measure the force to lift the Safety Hook from its resting position. Typically, the Safety Hook is resting on the cut-out in the Passenger Door.
- Open the Passenger Door.
 - Attach a spring scale with a suitable measurement range to the lowest grip. Refer to the figure below.
 - Measure the force to lift the Safety Hook from its resting position.
 - Verify that the Safety Hook does not lift from its resting position when a force of 0.1 kg / 1 N is applied.
 - If the Safety Hook lifts with a smaller force, check the spring for correct function. Replace if necessary and repeat the test.
 - Record the measured force on the execution report in Appendix B, if the spring was replaced, record the replacement and the measured forces before and after the replacement on the execution report in Appendix B.
 - After releasing the force, the Safety Hook must snap back into its resting position.
 - Record if the Safety Hook snapped back into its resting position.
 - If the Safety Hook does not snap back:
 - Examine the spring of the Safety Hook.
 - Check the attachment of the Safety Hook for increased friction.
 - Check for interferences in the range of motion of the Safety Hook
 - Record findings on the execution report in Appendix B.
 - Rectify any findings.
 - Repeat the test.
 - In case of doubt, contact Diamond Aircraft Industries GmbH

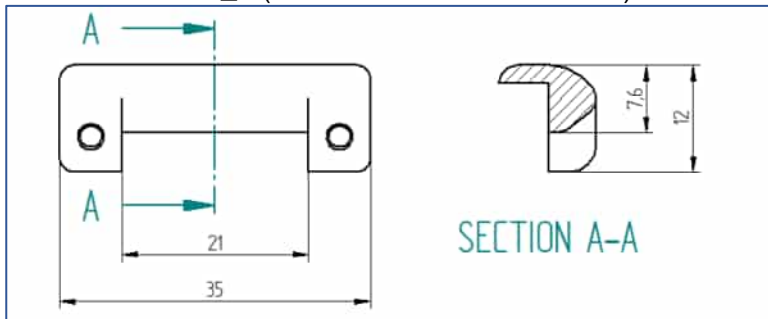


8 Data Collection: Identify the version of the Retaining Bracket:

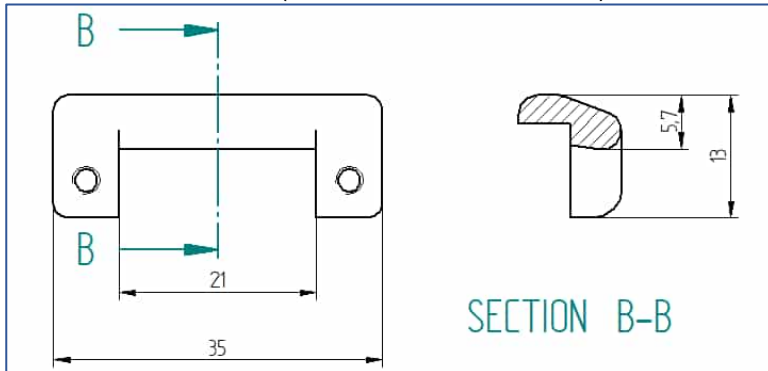
DA4-5200-00-69 (Small)



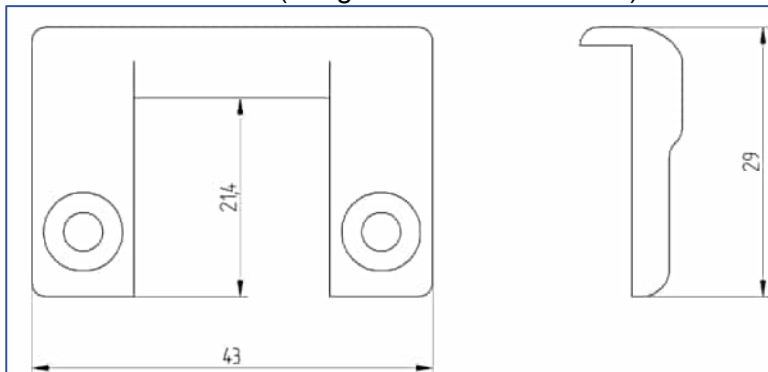
DA4-5200-00-69_1 (Extended without Undercut)



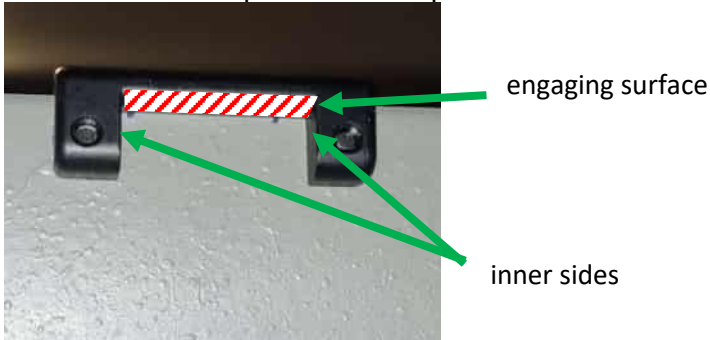

DA4-5200-00-69_02 (Extended with Undercut)



DA4-5200-00-69-SB (Long Extended for Retrofit)



Record the version of the Retaining Bracket on the execution report in Appendix B.

| | |
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| 9 | <p>If Retaining Bracket DA4-5200-00-69 is installed (refer to step 8.):</p> <ul style="list-style-type: none"> • Replace the Retaining Bracket according to MSB 42-083/MSB 42NG-014 (refer also to EASA AD 2010-0235). • Record replacement of the retaining bracket on the execution report in Appendix B. |
| 10 | <p>Examine the Retaining Bracket for signs of wear, corrosion and poor condition.</p> <ul style="list-style-type: none"> • There must be no corrosion on the Retaining Bracket. • Wear at the inner sides of the Retaining Bracket: maximum 0.5 mm per side. • The engaging surface of the Retaining Bracket and the edge of the engaging surface facing the Retaining Bracket must be free from steps and ridges. • Scratches or uniform wear of surface protection are permitted.  <ul style="list-style-type: none"> • The thickness of the Retaining Bracket measured perpendicular to the upper surface must be greater than <ul style="list-style-type: none"> ○ 4 mm (for Retaining Bracket DA4-5200-00-69_02 (extended with undercut), or ○ 6 mm (for all other Retaining Brackets, refer to Step 8).  <ul style="list-style-type: none"> • The width of the Retaining Bracket (measured i.a.w. picture below) must be greater than 10 mm. <ul style="list-style-type: none"> ○ Variation of the width over the whole length of the Retaining Bracket must be less than 0.2 mm. |



Replace the Retaining Bracket, if:

- any of the Retaining Bracket dimensions are not within the given tolerances, or
- if corrosion is found, or
- the wear limit is exceeded, or
- steps or ridges are found.

Record the replacement of the retaining bracket on the execution report in Appendix B.

11 Examine if the Safety Hook properly engages in the Retaining Bracket:

Note

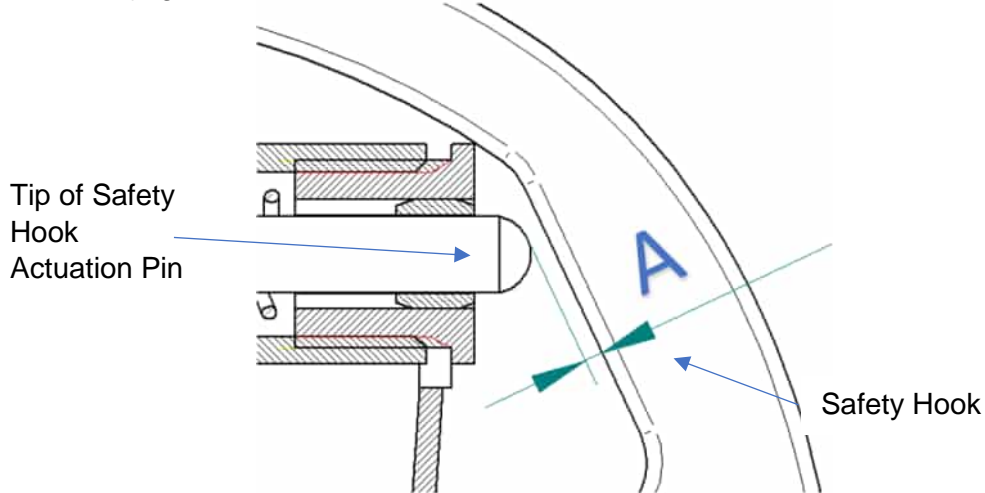
The Safety Hook Actuation Pin must not be pressed during this step.

- Close and latch the Passenger Door.
- Unlatch the Passenger Door from the outside and pull on the outer Passenger Door Handle.
 - The Safety Hook must engage in the Retaining Bracket and prevent the Passenger Door from further opening.
- Pull on the outer Passenger Door Handle with 15 ± 1 kg / 150 ± 10 N.
 - The Safety Hook must not disengage but must remain properly engaged in the Retaining Bracket
- Record the check results on the execution report in Appendix B.

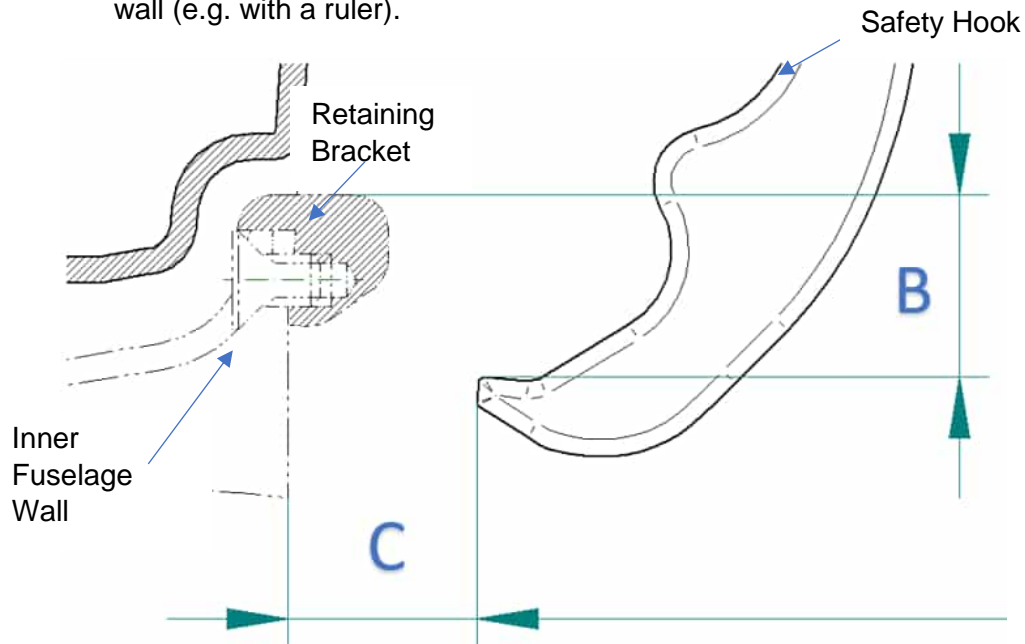
If the Safety Hook disengages, identify the cause, record it on the execution report in Appendix B **and** contact Diamond Aircraft Industries GmbH.

12 Data Collection: Measure the following dimensions:

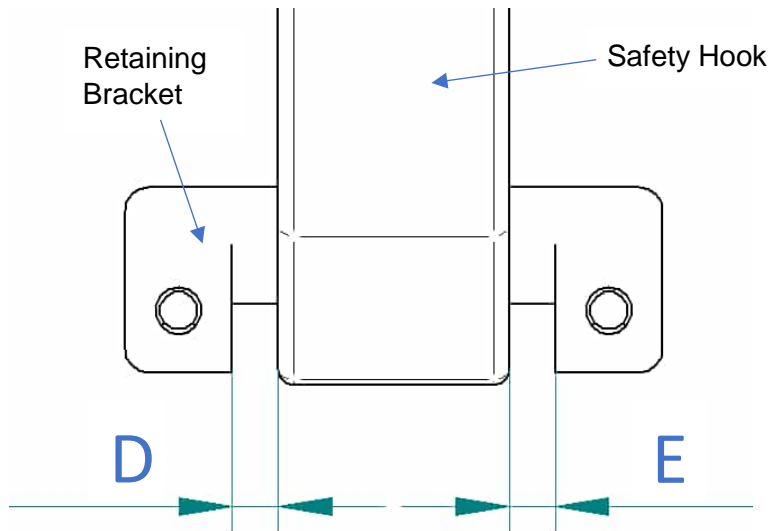
- Close and latch the Passenger Door.
- Record the measurements on the execution report in Appendix B.
 - Dimension A: distance of Actuation Pin to Safety Hook in resting position (e.g. with a feeler gauge).



- Dimension B: distance between top surface of the Retaining Bracket to top surface of engaging section of Safety Hook in resting position of Safety Hook (e.g. with a ruler).
- Dimension C: horizontal distance between tip of Safety Hook and fuselage wall (e.g. with a ruler).






- Unlatch the Passenger Door and push the Passenger Door open, engaging the Safety Hook into the Retaining Bracket, apply slight pressure to the Passenger Door to keep the Safety Hook engaged during the measurement.
- Record the measurements on the execution report in Appendix B.
 - Dimension D (e.g. with a ruler).
 - Dimension E (e.g. with a ruler).



- 13 Examine the Safety Hook Actuation Pin for corrosion, wear and poor condition.
- There must be no corrosion on the sliding surfaces.
 - If corrosion is found, replace corroded parts.
 - The play of the Actuation Pin in the bushing must be less than 1 mm.
 - If the play is greater than 1 mm, replace the affected parts.
 - Record any findings and replaced parts on the execution report in Appendix B.



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| 14 | <p>Examine if there is noticeable friction in the Safety Hook mechanism:</p> <ul style="list-style-type: none">• Open the Passenger Door.• Lift the Passenger Door sufficiently to prevent any contact between the Safety Hook and the Retaining Bracket.• Push the Safety Hook Actuation Pin.<ul style="list-style-type: none">○ The Safety Hook Actuation Pin must operate smoothly.○ After releasing the Safety Hook Actuation Pin, the Pin must snap into the initial position instantaneously (less than 1 second).<ul style="list-style-type: none">▪ If the Actuation Pin does not snap back into the initial position, lubricate the pin.• Move the Passenger Door to the fully closed position, do not latch the Passenger Door.<ul style="list-style-type: none">○ The Safety Hook must be in its resting position, upon opening of the door it must engage in the Retaining Bracket.○ Otherwise, repeat step 11.• Push the Safety Hook Actuation Pin.<ul style="list-style-type: none">○ The Safety Hook must disengage, allowing the Passenger Door to be opened.○ If the Safety Hook Actuation Pin does not operate smoothly, isolate the problem:<ul style="list-style-type: none">▪ Movement of the Safety Hook Actuation Pin in its housing is not smooth and/or Actuation Pin does not snap into initial position: lubricate i.a.w. AMM Section 12-20 and repeat this step. If the problem persists after lubrication, contact Diamond Aircraft Industries GmbH for additional instructions.▪ Friction in the hinge of the Safety Hook or chafing of the Safety Hook on the door structure.<ul style="list-style-type: none">• Contact Diamond Aircraft Industries GmbH for additional instructions).▪ Friction between the Safety Hook Actuation Pin and the Safety Hook.<ul style="list-style-type: none">• Polish the contact surfaces of the Safety Hook Actuation Pin and the Safety Hook (respect the maximum permitted depth of the groove in the Safety Hook acc. step 6) and repeat this examination).• Record the findings and any rectifications on the execution report in Appendix B. |
|----|---|

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| <p>15</p> | <p>Data Collection: Identify the version of the Passenger Door latching mechanism:</p> <p>Old latching mechanism:</p>  <p>New latching mechanism (MÄM 42-097 installed):</p>  <p>Record the version of the Passenger Door latching mechanism on the execution report in Appendix B.</p> |
| <p>16</p> | <p>If the old Passenger Door latching mechanism is installed (refer to step 15): Visually inspect the spring.</p> <ul style="list-style-type: none"> • Move the Passenger Door Handle to the unlatched position. • Visually inspect the spring. <ul style="list-style-type: none"> ○ Look especially for a broken winding, replace the spring if found broken. • Record any findings on the execution report in Appendix B.  |
| <p>17</p> | <p>Data Collection: If MÄM 42-097 is installed (refer to step 15): Identify, when the gas spring of the Passenger Door latching mechanism was last replaced/installed.</p> <ul style="list-style-type: none"> • Inspect the aircraft log. • Record the date of the last replacement on the execution report in Appendix B. |

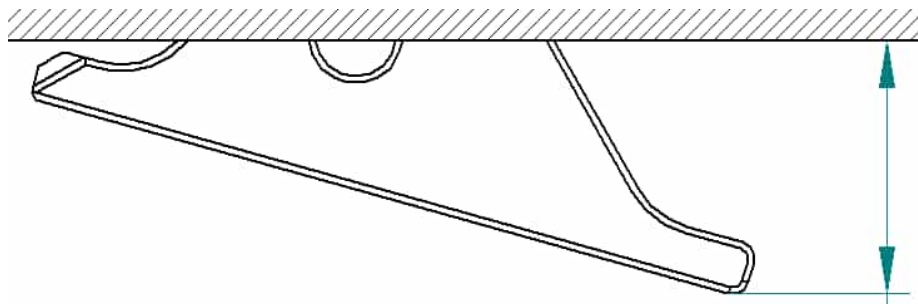
18 If MÄM 42-097 is installed (refer to step 15), examine the condition of the gas spring of the latching mechanism:

- Open the Passenger Door.
- Move the Passenger Door handle into unlatched position.
- Slowly move the Passenger Door handle towards the latched position and measure the distance at which the Passenger Door handle snaps into latched position by itself (measured at the outermost point of the lever, refer to sketch below).

Caution

Make sure that the latching bolts do not contact the fuselage surface.

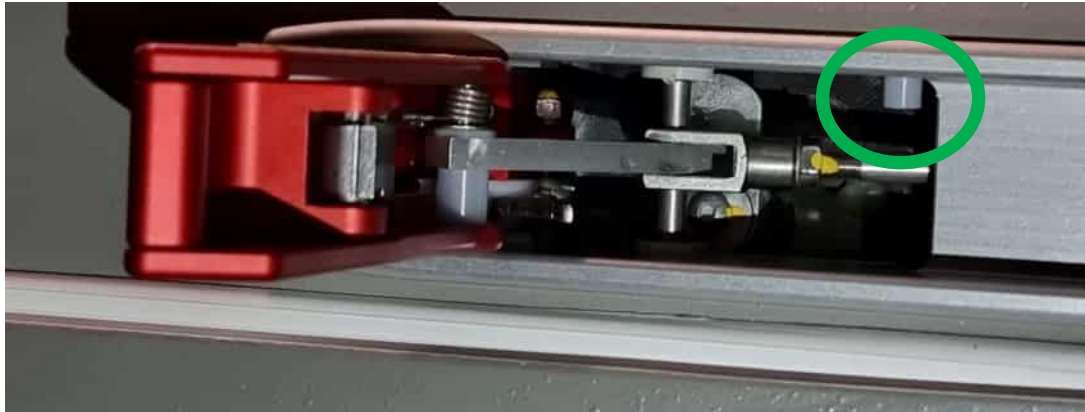
- If the distance is less than 20 mm, replace the compression gas spring. Refer to AMM Section 52-10. Repeat this step after replacement.
 - If the distance is less than 20 mm after replacement of the gas spring, the cause is high friction in the latching system.
 - Examine the latching bolts according to step 22.
 - If the reason for high friction in the latching system cannot be found, replace the latching system i.a.w. AMM section 52-10.
 - Repeat this step after parts replacement.
- Record the measured distance and any replacements on the execution report in Appendix B.



19 If MÄM 42-097 is installed (refer to step 15), examine the adjustment of the gas spring in the Passenger Door latching mechanism.

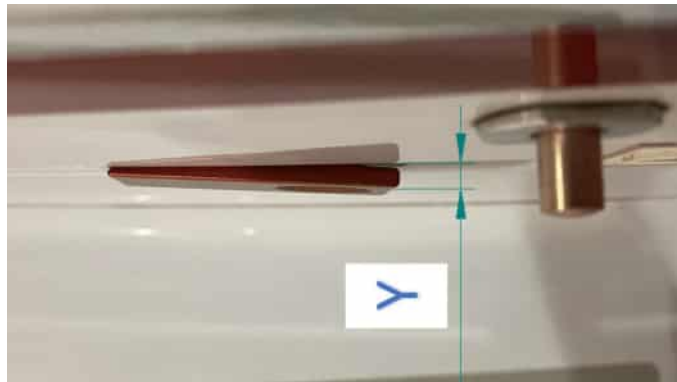
The gas spring inside the door handle must push the door handle into the latched position firmly against the stop:

- Open the Passenger Door.
- Move the Passenger Door Handle to the latched position.
- Examine, if the door handle is pushed into the mechanical stop inside the door handle mechanism (marked in the pictures below).
- If the Passenger Door Handle is not pushed against the mechanical stop by the gas spring, adjust the gas spring (refer to AMM section 52-10) and repeat this step.
- Record whether the gas spring was adjusted properly on the execution report in Appendix B.



20 Data collection: Position of the outside Passenger Door Handle.

- Close the Passenger Door.
- Press the outside Passenger Door handle into the latched position until a distinct stop is reached.
- Examine if the Passenger Door Handle is recessed, flush or protruding over the Passenger Door surface. Record the condition on the execution report in Appendix B.
- If the handle protrudes from the surface of the Passenger Door, measure the protrusion.
- Record the measurement on the execution report in Appendix B.



Protrusion Measurement



Example: Recessed Passenger Door Handle

21 Measure the Passenger Door handle actuation force:

- Close and latch the Passenger Door.
- Attach a spring scale with suitable measurement range to the outside Passenger Door handle.
- Measure the force necessary to unlatch the Passenger Door.
 - The force must not exceed 6 kg / 60 N.
 - If the force exceeds 6 kg / 60 N
 - Identify the reason for exceeding the maximum force limit and rectify any findings.
 - Repeat the test.
- Open the Passenger Door.
- Move the Passenger Door Handle to the latched position.

Caution

Make sure that the latching bolts do not contact the fuselage surface.

- Measure the force necessary to move the Passenger Door handle to the unlatched position.
 - The force must exceed 1.8 kg / 18 N.
 - If the force does not exceed 1.8 kg / 18 N
 - Identify the reason for not reaching the minimum force limit and rectify any findings.
 - Repeat the test.
- Record the measured forces and any findings on the execution report in Appendix B.



Example force measurement

22 Examine the latching bolts of the Passenger Door for looseness, excessive play, wear, corrosion, and poor condition.

- It must not be possible to rotate the latching bolts by hand force.
- The radial play of the latching bolts must not exceed 0.8 mm at the tip of the latching bolts.
 - If the radial play exceeds 0.8 mm, contact Diamond Aircraft Industries GmbH.
- No sign of corrosion is allowed.
 - If signs of corrosions on the latching bolts are found, replace the latching bolts.
- No deformation (dents, bends, cracks) on the latching bolts is allowed.
 - If deformations of the latching bolts are found, replace the latching bolts.
- If parts are replaced, repeat this step.
- In case of doubt, contact DAI for instructions.
- Record any findings on the execution report in Appendix B.



Example of a serviceable Latching Bolt

23 Measure the extension length of the latching bolts of the Passenger Door.

- Unlatch and open the Passenger Door.
- Move the Passenger Door latching mechanism to the latched position.

Caution

Make sure that the latching bolts do not contact the fuselage surface.

- Measure the extension length at the bottom of the front and rear latching bolts in mm. Refer to pictures below.
 - The front latching bolt extension length must be 40 ± 2 mm.
 - If the extension length is out of tolerance, adjust the latching bolt if possible, or replace latching bolt if necessary.
 - After adjustment or replacement repeat this step.
 - If MÄM 42-687 is **not** installed, the rear latching bolt extension length must be 40 ± 2 mm.
 - If the extension length is out of tolerance, adjust the latching bolt if possible, or replace latching bolt if necessary.
 - After adjustment or replacement repeat this step.
 - If MÄM 42-687 is installed, the rear latching bolt extension length must be 44 ± 1 mm.
 - If the extension length is out of tolerance, adjust the latching bolt if possible, or replace latching bolt if necessary.
 - After adjustment or replacement repeat this step.
- Record the measurements and any findings on the execution report in Appendix B.

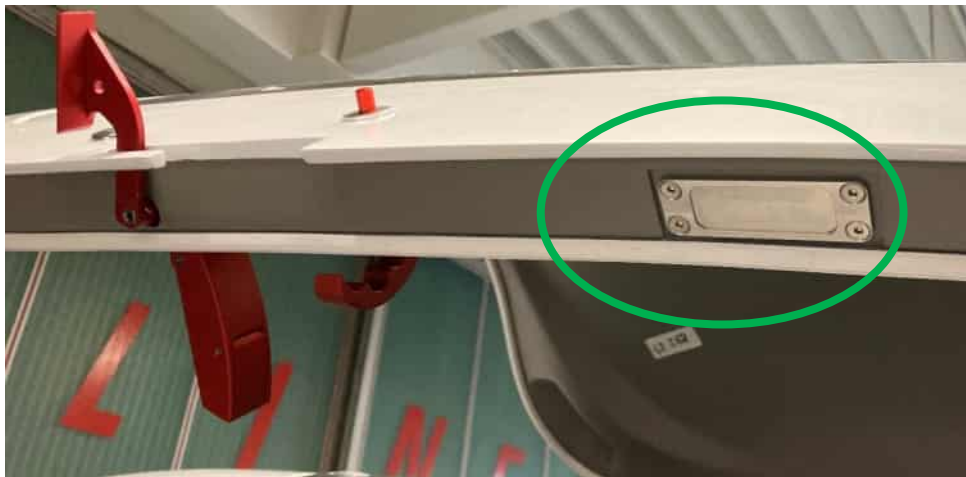




Front Latching Bolt



Rear Latching Bolt

Note: Aid for identification: There is a metal plate bolted to the lower surface of the Passenger Door if MÄM 42-687 is installed. Refer to picture below.



| | |
|----------------------|--|
| 24 | <p>Data Collection: Inspect the door frame in the area around the front and rear latching bolts for damage.</p> <p>Record any damage on the execution report in Appendix B.</p> <div style="text-align: center;">  <p>Front</p>  <p>Rear</p> </div> |
| Modifications | |
| 25 | <p>Examine the aircraft log, if RSB 42-125 / RSB 42NG-065 was performed.</p> <p>Record whether the RSB has been performed on the execution report in Appendix B.</p> |
| 26 | <p>Insert TR-MÄM 42-1333 into the AFM or use an AFM revision into which this temporary revision has been incorporated.</p> |
| 27 | <p>Insert AMM-TR-MÄM 42-1334 into the AMM or use an AMM revision into which this temporary revision has been incorporated.</p> |

- 28 If MÄM 42-097 is installed (new latching mechanism, refer to step 15), install placard D60-1133-10-09 to the upper side of the inner canopy handle.

Note

The placard can be self-fabricated in accordance with Appendix A.

- Unlatch the canopy.
- Clean the canopy handle from dirt and grease.
- Align the placard with the straight edge and position it in spanwise direction so that it is completely visible from the pilot's perspective if the canopy handle is in the unlatched position.
- The placard must disappear when the canopy handle is in the latched position.

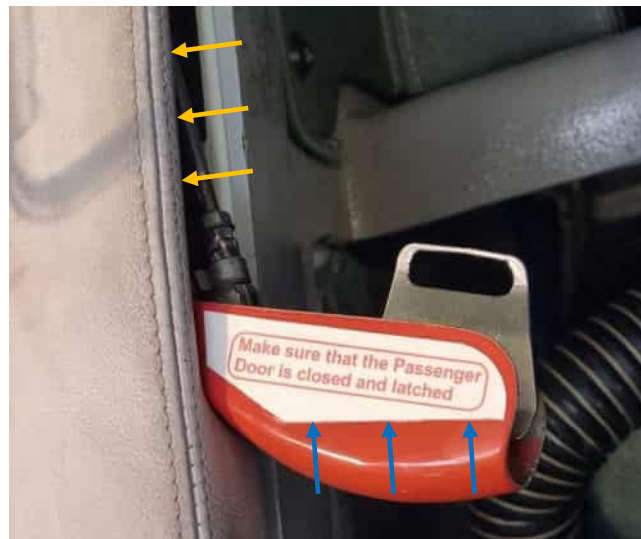


- 29 If MÄM 42-097 is not installed (old latching mechanism, refer to step 15), install placard D60-1133-10-19 to the upper side of the inner canopy handle.

Note

The placard can be self-fabricated in accordance with Appendix A.

- Unlatch the canopy.
- Clean the canopy handle from dirt and grease.
- Align the placard so that the straight edge (indicated by the blue arrows) disappears behind the edge of the door frame (indicated by the yellow arrows), seen from the pilot's perspective with the canopy handle is in the latched position.
 - The placard must disappear when the canopy handle is in the latched position.
- the placard must be completely visible from the pilot's perspective if the canopy handle is in the unlatched position.



30 Install placard D60-1133-10-08 to the Passenger Door.

Note

The placard can be self-fabricated in accordance with Appendix A.

- Clean the area where the placard will be attached from dirt and grease.
- Position the placard approximately 10 mm forward of the Safety Hook cut-out in the Passenger Door and approximately 10 mm above the Passenger Door Handle.



New latching mechanism – MÄM 42-097 installed (refer to step 15)



Old latching mechanism (refer to step 15)



- 31 If MÄM 42-097 is installed (new latching mechanism, refer to step 15), install placard D60-1133-20-60 on the top surface of the inner Passenger Door Handle.

Note

The placard can be self-fabricated in accordance with Appendix A.

- Clean the inner Passenger Door handle from dirt and grease.
- Close and latch the Passenger Door.
- Mark the line on the Passenger Door handle to which it is visible when observed from the pilot's perspective over the LH shoulder.
- Unlatch the Passenger Door.
- Align the placard with the marked line.
- Trim the placard on the edges of the Passenger Door Handle, if necessary.
- The placard must completely disappear with the Passenger Door latched when observed from the pilot's perspective over the LH shoulder.



| | |
|----|--|
| 32 | <p>If MÄM 42-097 is not installed (old latching mechanism, refer to step 15), install placard D60-1133-20-70 on the top surface of the inner Passenger Door Handle.</p> <p style="text-align: center;">Note</p> <p style="text-align: center;">The placard can be self-fabricated in accordance with Appendix A.</p> <ul style="list-style-type: none"> • Clean the inner Passenger Door handle from dirt and grease. • Close and latch the Passenger Door. • Mark the line on the Passenger Door handle to which it is visible when observed from the pilot's perspective over the LH shoulder. • Unlatch the Passenger Door. • Align the placard with marked line. • Trim the placard on the edges of the Passenger Door Handle, if necessary. • The placard must completely disappear with the Passenger Door latched when observed from the pilot's perspective over the LH shoulder. <div style="display: flex; justify-content: space-around;">   </div> |
| 33 | Clean working areas, check for foreign objects. |
| 34 | Check all altered, replaced, repaired parts for proper function. |
| 35 | Test all systems in working area for function. |
| 36 | Do all necessary entries in the airplane logs. |
| 37 | Store any removed parts for later requests by Diamond Aircraft Industries GmbH. |

| | |
|----|--|
| 38 | <p>Submit the execution report in Appendix B to Diamond Aircraft Industries GmbH.</p> <ul style="list-style-type: none">• Use preferably the electronic execution report via the Diamond Partner Portal https://partners.diamondaircraft.com/.• Alternatively send the execution report to executionreports@diamondaircraft.com.• Keep a copy of the execution report in the aircraft log. |
|----|--|

IV REPETITIVE INSPECTION

| | |
|---|---|
| 1 | Record any finding during the detailed inspections below in addition to the requested information on the execution report in Appendix B. Store any removed parts for later requests by Diamond Aircraft Industries GmbH. |
| 2 | Perform steps 2 through 24 of the Initial Inspection. Refer to section III. |
| 3 | Clean working areas, check for foreign objects. |
| 4 | Check all altered, replaced, repaired parts for proper function. |
| 5 | Test all systems in working area for function. |
| 6 | Do all necessary entries in the airplane logs. |
| 7 | Store any removed parts for later requests by Diamond Aircraft Industries GmbH. |
| 8 | Submit the execution report in Appendix B to Diamond Aircraft Industries GmbH. <ul style="list-style-type: none">• Use preferably the electronic execution report via the Diamond Partner Portal https://partners.diamondaircraft.com/.• Alternatively send the execution report to executionreports@diamondaircraft.com.• Keep a copy of the execution report in the aircraft log. |

Appendix A - Placards**Fabrication instruction**

1. Print the placards with waterproof ink or with a laser printer according to scale (see bottom right corner).
2. Attach a clear adhesive tape over the printed side of the placard.
3. Attach a film type double sided adhesive tape on the reverse side of the printed placard.
4. Cut around the edge of the placard.
5. Attach the placard according to the instructions of the Work Instruction above.

D60-1133-10-09

**Make sure that the Passenger Door
is closed and latched**

D60-1133-10-19

**Make sure that the Passenger
Door is closed and latched**

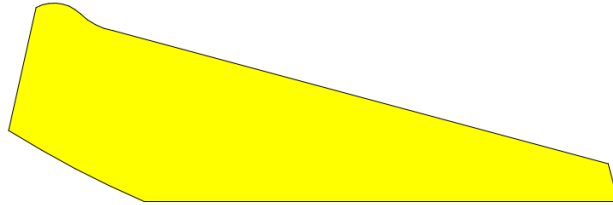
D60-1133-10-08

WARNING
Do NOT touch safety hook during flight
Do NOT close the door
if found open during flight

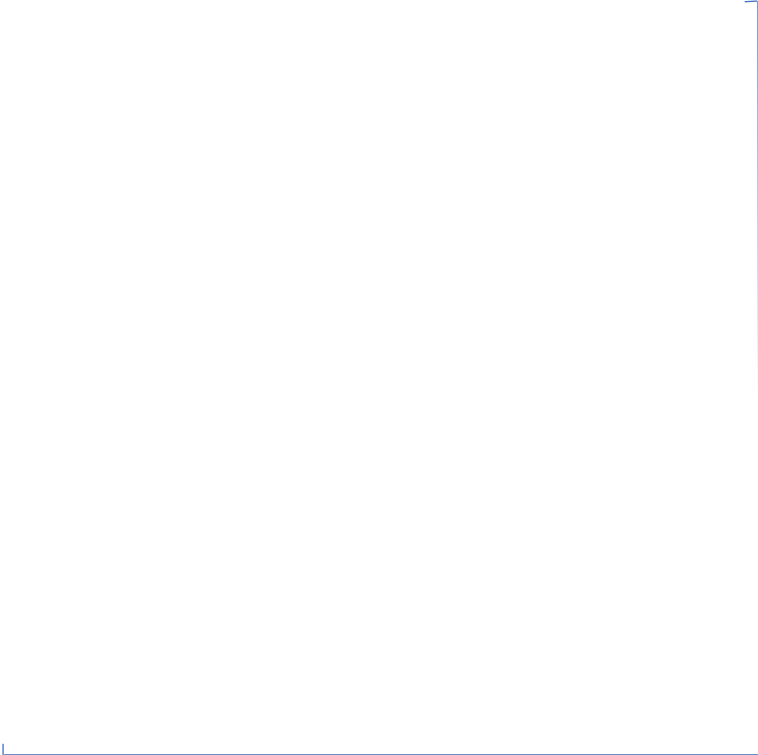
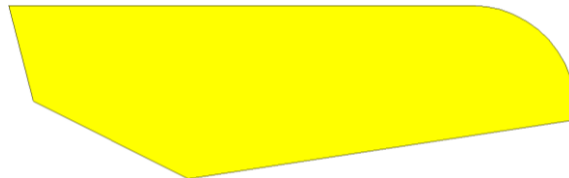
100 mm

100 mm

D60-1133-20-60



D60-1133-20-70



100 mm

100 mm

APPENDIX B
EXECUTION REPORT TO
WI-MSB 42-149
WI-MSB 42NG-095

AIRPLANE INFORMATION

Airplane Serial Number _____

Airplane Registration _____

Airplane Operator _____

Hours of operation of airplane _____

Number of landings _____

Hours of operation – engine LH _____

 RH _____

Typical operation of airplane private, club, training, other _____

Date, Name, Sign

Submit the execution report in Appendix B to Diamond Aircraft Industries GmbH.

- Use preferably the electronic execution report via the Diamond Partner Portal.
 - Login to the Diamond Partner Portal <https://partners.diamondaircraft.com/>.
 - Search for the Aircraft (A/C):
 - Use the search field at the top, or
 - Navigate through the menu: Support > My Fleet, then open the A/C by clicking the link.
 - In the right section "Aircraft Action," click the button "Add Execution Report".
 - Choose "MSB 42NG-095/MSB 42-149".
 - Either create a new execution report or select a draft you previously created.
 - Save and then submit the execution report
- Alternatively send the execution report to executionreports@diamondaircraft.com.

Keep a copy of the execution report in the aircraft log.

| EXECUTION REPORT WI-MSB 42-149 / WI-MSB 42NG-095 | | |
|--|--|--|
| Step | Reported information | Answer |
| Step 2 | Record any findings below. | |
| Step 3 | Record any findings below. | |
| Step 4 | Record any findings below. | |
| Step 5 | Installed Version of Safety Hook: | |
| | DA4-5221-00-52_1 (Straight Bottom) | <input type="radio"/> |
| | DA4-5221-00-52_03 (Round Bottom) | <input type="radio"/> |
| Step 6 | Was the Safety Hook replaced? | <input type="radio"/> Yes / <input type="radio"/> No |
| | Record any findings below. | |
| Step 7 | Force to lift the Safety Hook (in kg or N) as found on aircraft | |
| | Force to lift the Safety Hook (in kg or N) after the replacement of spring (if required) | |
| | Did the Safety Hook snap back into its resting position? | <input type="radio"/> Yes / <input type="radio"/> No |
| | Record any findings below. | |
| Step 8 | Identify which Retaining Bracket version is installed | |
| | DA4-5200-00-69 (Small) | <input type="radio"/> |
| | DA4-5200-00-69_1 (Extended without undercut) | <input type="radio"/> |
| | DA4-5200-00-69_02 (Extended with undercut) | <input type="radio"/> |
| | DA4-5200-00-69-SB (Long Extended for Retrofit) | <input type="radio"/> |
| Step 9 | Was the Retaining Bracket replaced? | <input type="radio"/> Yes / <input type="radio"/> No |
| Step 10 | Was the Retaining Bracket replaced? | <input type="radio"/> Yes / <input type="radio"/> No |
| | Record any findings below! | |
| Step 11 | Did the Safety Hook engage in the Retaining Bracket? | <input type="radio"/> Yes / <input type="radio"/> No |
| | Did the Safety Hook disengage? | <input type="radio"/> Yes / <input type="radio"/> No |
| | If the Safety Hook did disengage: Cause isolated and identified as: | |
| | Record any findings below. | |
| Step 12 | Record the measured dimensions (in mm) | |
| | A | |
| | B | |
| | C | |
| | D | |
| | E | |
| Step 13 | Record any findings below. | |

| EXECUTION REPORT WI-MSB 42-149 / WI-MSB 42NG-095 | | |
|--|--|---|
| Step | Reported information | Answer |
| Step 14 | Actuation Pin | |
| | The Actuation Pin is in acceptable condition. | <input type="radio"/> Yes / <input type="radio"/> No |
| | The Actuation Pin is damaged | <input type="radio"/> |
| | Operation not smooth | <input type="radio"/> |
| | The Spring is broken | <input type="radio"/> |
| | O-Ring failed | <input type="radio"/> |
| | Pin housing is damaged | <input type="radio"/> |
| | Pin housing thread connection is loose | <input type="radio"/> |
| | Pin bushing is worn | <input type="radio"/> |
| | Smooth operation | <input type="radio"/> |
| | Rough operation | <input type="radio"/> |
| | | Record any rectifications below! |
| Step 15 | Which version of door latching mechanism is installed? | |
| | Old Design | <input type="radio"/> |
| | New design (MÄM 42-097) | <input type="radio"/> |
| Step 16 | Record any findings below. | |
| Step 17 | If MÄM 42-097 is installed: Date of the last Passenger Door gas spring replacement | MM/YYYY |
| Step 18 | Gas spring function | |
| | Distance to automatic close (in mm) | |
| | If the gas spring is replaced: Distance to automatic close (in mm) after gas spring replacement | |
| | Record any findings below. | |
| Step 19 | Was the gas spring adjusted properly? | <input type="radio"/> Yes / <input type="radio"/> No |
| Step 20 | Position of the outside Passenger Door handle | <input type="radio"/> Protrusion <input type="radio"/> Flush <input type="radio"/> Recessed |
| | Protrusion Y (in mm) | |
| Step 21 | Door handle actuation force (in kg or N) | |
| | Closed Passenger Door as found on aircraft | |
| | Closed Passenger Door after the rectification | |
| | Open Passenger Door as found on aircraft | |
| | Open Passenger Door after the rectification | |

| EXECUTION REPORT WI-MSB 42-149 / WI-MSB 42NG-095 | | |
|--|--|--------------|
| Step | Reported information | Answer |
| Step 22 | Record any findings below. | |
| Step 23 | Latching Bolt extension length in millimeter as found on aircraft. Record any findings below. | |
| | Front (40 ± 2 mm) | |
| | Rear (40 ± 2 mm, if MÄM 42-687 is not installed) (44 ± 1 mm, if MÄM 42-687 is installed) | |
| Step 24 | Record any findings below. | |
| Step 25 | Is RSB 42-125/RSB 42NG-065 installed? | O Yes / O No |
| Additional Findings (Append additional pages if necessary) | | |
| | | |