Subject: Inspection or modification of elevator and elevator trim control system

Concerned: G 115/ G 115A/ G 115B, all S/N’s

Urgency: Action A., B., C.: at the next annual inspection, not later than 31 December 1993
Action D.: optional

Procedure: On aircraft, which are permanently exposed to aggressive climatic conditions (i.e. sea area), and have not been adequately maintained, corrosion has been detected on elevator levers and at the elevator trim control system in the area of the horizontal tail. An inspection for corrosion, and, if corrosion is determined, an exchange of the concerned parts for parts made from non-corrosive material is mandatory as a precautionary measure.

Actions: A. All parts of the elevator trim control system in the horizontal tail area must be inspected visually for corrosion. Corroded parts must be exchanged (refer to sketch).

Note: The stud bolt plate (21), covered with laminate, must not be exchanged necessarily. It is permissible to remove corrosion from stud bolts and protect stud bolts with corrosion protective (e.g. LPS 3).

<table>
<thead>
<tr>
<th>Item</th>
<th>Name</th>
<th>P/N</th>
<th>Item</th>
<th>Name</th>
<th>P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Trim lever mounting</td>
<td>115-4297</td>
<td>12</td>
<td>Nut</td>
<td>LN 9348-M5</td>
</tr>
<tr>
<td></td>
<td>bracket 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Trim rod 6</td>
<td>115-4446</td>
<td>13</td>
<td>Washer</td>
<td>LN 9025-5,3</td>
</tr>
<tr>
<td>3</td>
<td>Trim rod 7</td>
<td>115-4447</td>
<td>14</td>
<td>Ball bolt</td>
<td>A 8 SxN 03/2</td>
</tr>
<tr>
<td>4</td>
<td>Trim lever 4</td>
<td>115-4301</td>
<td>15</td>
<td>Locking spring</td>
<td>AS8 - SF</td>
</tr>
<tr>
<td>5</td>
<td>Trim lever 5</td>
<td>115-4303</td>
<td>16</td>
<td>Nut</td>
<td>LN 9348-M4</td>
</tr>
<tr>
<td>6</td>
<td>Nut</td>
<td>LN 9348-M5</td>
<td>17</td>
<td>Washer</td>
<td>LN 9025-4,3</td>
</tr>
<tr>
<td>7</td>
<td>Washer</td>
<td>DIN 9021-5,3</td>
<td>18</td>
<td>Screw</td>
<td>LN 9037-M4x18</td>
</tr>
<tr>
<td>8</td>
<td>Screw</td>
<td>LN 9037-M5x20</td>
<td>19</td>
<td>Bracket R/H</td>
<td>115-3576</td>
</tr>
<tr>
<td>9</td>
<td>Washer</td>
<td>LN 9025-6,4</td>
<td>20</td>
<td>Bracket L/H</td>
<td>115-3575</td>
</tr>
<tr>
<td>10</td>
<td>Nut</td>
<td>LN 9348-M6</td>
<td>21</td>
<td>Stud bolt plate</td>
<td>115-3553</td>
</tr>
<tr>
<td>11</td>
<td>Screw</td>
<td>LN 9037-M6x40</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
B. The inspection or the exchange of the elevator mounting (lever L/H P/N 115-3573 and lever R/H P/N 115-3572) must be performed as follows:
1. Remove rudder, according to MM Chapter 27-20-30
2. Remove elevator, according to MM Chapter 27-30
3. Check L/H and R/H lever through the hole for internal corrosion (refer to sketch)

4. If corrosion is detected, the elevator mounting (lever L/H P/N 115-3573 and lever R/H P/N 115-3572) must be exchanged.
   For exchange, the elevator must be sent to the manufacturer.
   Note: If the extent of corrosion can not be determined exactly, the elevator may be sent to the manufacturer for inspection.
5. If the corrosion is only surface corrosion (very thick film of rust), the corrosion must be removed as far as possible and the lever protected internally using a proper corrosion protective (e.g. LPS 3), to restrict further corrosion.
   The rate of corrosion must then be checked periodically (minimum every 100 hours or during each annual inspection). If the aircraft is exposed to extreme weather conditions, (e.g. high humidity, high temperatures, sea climate) the inspection interval must be shorter.
6. Weigh elevator and determine residual momentums, according to MM Chapter 08.
7. Install elevator, according to MM Chapter 27-30.
   Note: The installation of an auxiliary hinge ring is recommended for an easier assembly (refer to IM 115-19). A 6 mm longer hinge bolt must be used! (refer to sketch)

<table>
<thead>
<tr>
<th>Item</th>
<th>Name</th>
<th>P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hinge</td>
<td>115-1140</td>
</tr>
<tr>
<td>2</td>
<td>Spiral pin</td>
<td>DIN 7344 2x10</td>
</tr>
<tr>
<td>3</td>
<td>Auxiliary hinge ring</td>
<td>109B-1125</td>
</tr>
<tr>
<td>4</td>
<td>Hinge bolt</td>
<td>DIN 1434 6F-34</td>
</tr>
<tr>
<td>5</td>
<td>Hinge bolt</td>
<td>DIN 1434 6F-46</td>
</tr>
</tbody>
</table>
C. Check trim rod 3 for corrosion.  
If corrosion is detected, trim rod 3 must be exchanged according to MM Chapter 27-40.

D. Installation of an additional elevator hinge.  
To prevent delamination of the outboard elevator hinge, an additional elevator hinge can be optionally installed according to Installation Instructions No. 1078-30.

Final worksteps:
1. Install rudder, according to MM Chapter 27-20-30.
2. Check adjustment of elevator, elevator trim and rudder control systems, according to MM Chapter 06.
3. Perform functional test of elevator, elevator trim and rudder control systems.

Material:
The material can be obtained from GROB.

Weight and Balance:
Empty weight and empty weight c.g. must be determined newly after performing action B. and D.

Remarks:
1. The exchange of the elevator mounting (lever L/H P/N 115-3573 and lever R/H P/N 115-3572) can only be performed by GROB or in arrangement with GROB. For this the elevators must be sent to GROB.
2. If you have sold your aircraft in the meantime, would you kindly pass this information on to the new owner and forward his name and address and aircraft S/N to us.

Mattsies, 13 August 1993

Dipl. Ing. J. Altmann  
(Airworthiness engineer  
certification staff)

LBA approved:  
This Service Bulletin is originally written in German and approved by the German LBA on the 14 October 1993. The translation has been accomplished to the best of our knowledge and judgement. In case of doubt, the German original is authoritative.
 Diese Interne Änderungsmeldung ersetzt die Interne Änderungsmeldung vom 22.04.92.  
This Internal Change Note supersedes the Internal Change Note, dated 22.04.92.

Gegenstand:  
Subject:  
Lagerung der Steuerflächen  
Mounting of Control Surfaces

Betroffen:  
Concerned:
G 102, G 103, G 103SL, G 104, G 109, G 115 alle Baureihen / alle WerkNr.  
G 102, G 103, G 103SL, G 104, G 109, G 115 all series / all S/N's

Vorgang:  
Procedure:  
Um bei Reparaturen an Ruderlagern bzw. Rudern eine leichtere Montage der Ruder zu ermöglichen, ist es zulässig, den Lagerhilfsring 109B-1125 in Verbindung mit dem Spiralspannstift DIN 7343-2x10 zu verwenden.  
For easier mounting of control surfaces after repair of hinges or control surfaces, it is permitted to use an auxiliary hinge ring P/N 109B-1125 in combination with spiral pin P/N DIN 7343-2x10.

Maßnahmen:  
Actions:  
Die Montage hat je nach Lagerart gemäß Prinzipzeichnung (Prinzip entspricht G 109B ab WerkNr. 6500) zu erfolgen. Es ist in jedem Fall ein entsprechend längerer (6 mm) Lagerbolzen DIN 1434-6F zu verwenden.  
The installation must be performed, depending on hinge type, according to the diagrammatic sketch (shown is design of G 109B, as of S/N 6500). A longer (6 mm) hinge bolt DIN 1434-6F must be used.

Material:  
Material:
- Lagerhilfsring 109B-1125 (1)  
- Auxiliary hinge ring P/N109B-1125 (1)  
- Spannstift DIN 7343-2x10 (2)  
- Spiral pin P/N DIN 7343-2x10 (2)  
- 6 mm längerer Lagerbolzen DIN 1434-6F  
- 6 mm longer hinge bolt DIN 1434-6F

Hinweis:  
Remarks:  
Die durch diese IM betroffenen Zeichnungen werden nicht geändert, da es sich nur um eine Reparaturmaßnahme und nicht um eine generelle Änderung handelt.  
The drawings concerned by this Internal Change Note will not be revised due to the fact that this modification is only a repair measure, not a general modification.

---

1993 | TAG DAY | NAME | VERTEILER DISTRIBUTION  
---|---|---|---
BEARBEITET VON | 11.10.93 | Vodermeier |  
GEPRÜFT VON | 11.10.93 | J. Altmann |
<table>
<thead>
<tr>
<th>Lage:</th>
<th>109 B-1125</th>
<th>Lagerhilsring</th>
<th>2:1</th>
</tr>
</thead>
<tbody>
<tr>
<td>LST/FLGZ.</td>
<td>1569</td>
<td>1569</td>
<td>1569</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maße</th>
<th>6</th>
<th>6</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>B</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Gültig ab Werk - Nr.: 6500