



## SERVICE BULLETIN NO. MSB306-38

### I. TECHNICAL DETAILS

#### 1.1 Category:

**MANDATORY**

#### 1.2 Airplanes affected:

**TCDS-No. 306 (FAA TC No. G33EU):**  
ASTIR CS                      S/N 1001 - 1536

#### 1.3 Time of Compliance:

Not later than 30 April 2004

#### 1.4 Subject:

ATA-Code:                      ---

**Inspection of the vertical stabilizer attachment**

#### 1.5 Reason:

An incident was reported, where the spherical locking bolt of the horizontal stabilizer attachment was broken after landing. The investigation has proved a fatigue crack caused by alternating stress on to the stabilizer with unsymmetrical loads. This fatigue failure could have been caused by various external influences. To prevent further incidents the inspection of the front and rear vertical stabilizer attachment and especially an inspection of the spherical bolt P/N 102-3500.21 is mandatory.

#### 1.6 Concurrent documents:

None

#### 1.7 Approval Note:

The technical information contained in this document has been approved under the authority of JAA Design Organization Approval No. LBA.JA.014.

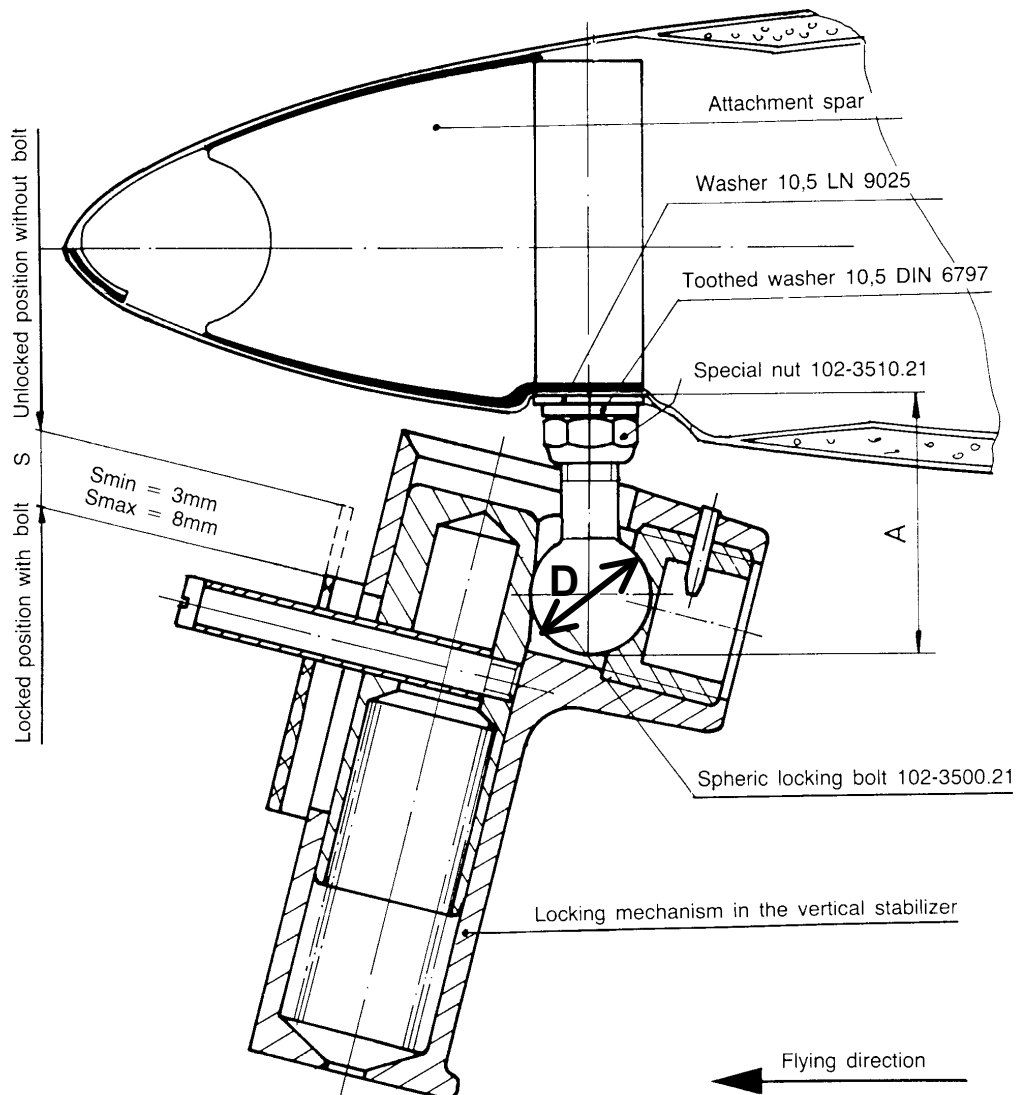
**ASTIR CS**

## 1.8 Accomplishment/ Instructions

1.8.1 Check front and rear attachment of the stabilizer for noticeable play before de-rigging the horizontal stabilizer. Therefore move the stabilizer at the tips carefully to all directions.

- if no play is noticed, perform further action according to para 1.8.2
- if play is noticed in the front attachment
  - the spherical bolt must be replaced (see para 1.8.2). Determine the ball diameter. During order advise the measured diameter "D" + 0.1 mm.
- if play is noticed in the rear attachment
  - the retaining pins 102-2142.46 must be replaced (refer to Flight Manual ASTIR CS Chapter "Maintenance")
  - is further play noticeable after replacement of the bolts, the bearings in the stabilizer spar web must be replaced (refer to Flight Manual ASTIR CS Chapter "Maintenance")

1.8.2 Inspect and replace the spherical locking bolt as follows:





- remove horizontal stabilizer according to the Flight Manual and lay down in a proper device
- determine and note the exact installation depth "A"

**NOTE:** The exact determination is very important for the re-installation not to change the stabilizer angle of incident.

- loosen the hexagon nut P/N 102-3510.21 (14 mm wrench) and remove spherical bolt using a screw driver
- inspect the thread of the bolt (especially in the area nut/ socket) for cracks or damage (using magnifying glass x20 or dye penetrant testing)
- if a crack or any indication for crack starting is found, the bolt must be replaced immediately

**NOTE:** During order of a new spherical bolt P/N 102-3500.21 the exact diameter "D" must be advised with tolerance  $\pm 0.1$ mm.

- install the inspected or new spherical bolt, thereby pay attention for the correct installation depth
- tighten hexagon nut P/N 102-3510.21 with torque 20 Nm (tolerance +4, -2) holding the bolt using a screw driver
- install horizontal stabilizer
- check and adjust if necessary the stabilizer angle of incident according to the Flight Manual

### 1.8.3 Incorporate Revision 8 dated 12.02.2004 into the Flight and Operating Manual.

### 1.9 Repetitive Actions

The inspection of the horizontal stabilizer attachment must be repeated during each annual inspection (refer also to Flight Manual, Revision 8).

**Caution:** Pay attention during maintenance, repair, pre-flight inspection and transport that the spherical bolt is not subject to loads, which can cause a fatigue damage !

### 1.10 Mass (Weight) and CG:

not affected



## **II. PLANNING INFORMATION**

### **2.1 Material & Availability:**

<b>Qty.</b>	<b>Name</b>	<b>Part No.</b>	<b>Remarks</b>
1	Spherical bolt	102-3500.21	Advise "D" $\pm$ 0.1 mm
1	Nut	102-3510.21	
1	Toothed washer	DIN 6797-10,5phr	
2	Retaining pin	102-2142.46	
2	Nut, hexagon	LN9348 - M8	

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<b>NOTE:</b> During order of a new spherical bolt P/N 102-3500.21 the ball diameter must be advised within $\pm$ 0.1 mm ! Replaced bolts must be returned to GROB-WERKE. !
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### **2.2 Special Tools:**

- magnifying glass x 20
- torque wrench

### **2.3 Labour:**

approx. 1 hour

### **2.4 Reference documents:**

N/A

### **2.6 Credit:**

N/A



### III. REMARKS

- 3.1 The correct execution of the instructions may be performed by a competent person or approved aviation workshop and has to be certified in the logbook by an authorised inspector.
- 3.2 If you have sold your aircraft in the meantime, would you kindly pass this information on to the new owner and forward his address and aircraft S/N to us.
- 3.3 For questions and assistance please contact:

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Approved by EASA under Approval

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Anerkannt durch  
Luftfahrt-Bundesamt

18. MÄR. 2004

