



## Airworthiness Directive

**D-2008-232**

## Luffahrt-Bundesamt

Airworthiness Directive Section  
Hermann-Blenk-Str. 26  
38108 Braunschweig  
GERMANY

### GROB

Effective Date: 11 July 2008

#### **Affected:**

Kind of aeronautical product:	Glider
Manufacturer:	Grob Aerospace, Tussenhausen-Mattsies, Germany
Type:	Grob G103 Twin Astir
Models affected:	G103 Twin II, G103A Twin II ACRO, G103C Twin III ACRO, G103C Twin III
Serial Numbers affected:	G103 Twin II S/N's 3730 to 3878 inclusive G103A Twin II ACRO S/N's 3730 to 34078 (K) inclusive G103C Twin III ACRO S/N's 34101 to 34203 inclusive G103C Twin III S/N's 36001 to 36014 inclusive
German Type Certificate No.:	315 (FAA TCDS G39EU)
EASA Type Certificate No.:	none

#### **Subject:**

Bolt cracking in the airbrake control system as a result of exceeding bolt torque and / or irregular adjustment of the airbrake system.

#### **Reason:**

The Luffahrt-Bundesamt received a report from the Grob Company that a bolt in the airbrake control was found failed during a pre-flight inspection on a G 103C TWIN III ACRO. During an extensive investigation (metallurgical investigation) a double sided fatigue crack was found as root cause. As the bolt is insignificantly stressed by cyclic bending the crack was probably caused by mean stress supported by a bolt torque exceeding the limit. The actions specified by this airworthiness directive are intended to prevent further bolt cracking which can result in airbrake as well as elevator failure (elevator control is on the same pedestal) and reduced controllability of the power glider.

#### **Action:**

This airworthiness directive requires the following actions:

1. Removal of bolt LN9037-M6x60 from the airbrake bell crank 103B-4437 and installation of a new bolt. The bolt has to be installed with the new locking nut LN9348-M6 and the bolt torque of 6.4 Nm (4.72lbs.ft).
2. All parts of the airbrake bell crank including the attachment parts have to be checked for any damage. Damaged parts must be replaced.
3. The airbrake locking force of the LH and RH wing using a spring balance has to be checked. They must be equal for both sides (guidance value:  $10 \pm 2$  daN, (22.48 $\pm$ 4.5 lbs)) and the locking must be clearly noticeable.
4. The airbrake locking force at the operating lever in the front cockpit has to be checked with the wings rigged. The guidance value is  $10 \pm 2$  daN, (22.48 $\pm$ 4.5 lbs). It must not exceed 15 – 20 daN (33.70 – 44.96lbs).

All necessary actions must be performed on the basis of the referenced manufacturer service bulletin.

#### **Compliance:**

All necessary actions must be performed not later than 30 September 2008.

#### **Technical publication of the manufacturer:**

GROB Service Bulletin NO. MSB 315-76/1 of 23 June 2008. This Service Bulletin becomes herewith part of this AD and may be obtained from:

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