



## THE GLIDING FEDERATION OF AUSTRALIA INC

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CANCELLED 29 OCT 2022  
REFER GFA AN019

### Airworthiness Alert 2015-2

#### Overview

The GFA has received a Service Difficulty Report detailing multiple uncommanded releases experienced on a nose hook installation fitted to a new ASK 21 Mi sailplane.

#### Flight History

The ASK 21 Mi at the time of the occurrence had logged 6 hours' time in service, the sailplane entering service 11/12/2014; the reported occurrence taking place on 13/4/2015.

#### Action Taken

Nut backed off one flat; no reoccurrence of defect from that time.

#### Recommendation

The fault was the over-tightening of a nut and bolt in the release circuit. The design unfortunately requires the nylock nut not to be tight. Being tight can stop the release closing over-centre.

Perform a functional check of the system ensuring free and a non-restricted actuation throughout the full control range. Ensure that the nut described in the attached report is free to rotate without restricting the movement of the mechanism. Further, inspectors must be diligent and understand the mechanics of the mechanism when performing maintenance and inspections. The slightest overtightening or binding even in a secondary control system has safety implications.

Dennis Stacey GFA CTO

29/07/2015

### Premature release ASK21mi VH-NQM

On 13 APR 15 the tow rope attached to the nose release disconnected at approximately 700 feet AGL without activation of the release knob.

#### Pilots Report

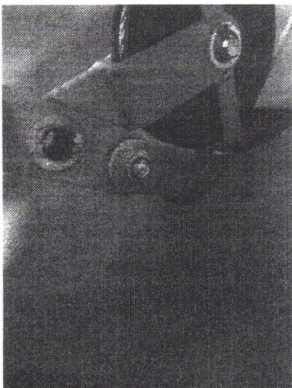
"After a normal takeoff and climb, at around 700 feet our glider moved a little out of station and the rope developed a small curve. On beginning to regain station a small increase in tension in the rope brought about an "auto" release of the rope."

#### Investigation.

It was discovered that the same aircraft had earlier the same day experienced an uninitiated release as the tug took up slack. This was assumed to be the rings not being inserted correctly at hook on. Further investigation revealed that this had also happened on a previous occasion.

The hook was removed and tested. The over centre readings were all within the normal range. The hook was reinstalled and pull back measurements were then taken at the front release knob. It was found that the pullback force reduced markedly just prior to the full closed position. The knob did retract fully. It was found that the release had not reached the fully closed position with the arm still 1-2mm from the over centre stop. Letting go of the release knob from the fully open position (allowing rapid closing) allowed the release to fully close. With normal controlled operation of the release, the stop was not reached.

It was found that the bolt attaching the pulley system to the Tost lever (shown in photo) was too tight causing binding just prior to the fully closed position. Loosening the nut slightly allowed normal operation. The fault and remedy was repeatable. The aircraft has completed 7 flights since rectification without further occurrences.



#### Conclusion.

I believe this problem is likely to recur as the design leads to tightening the bolt where it seems to need to be slightly loose to act as a pivot.

Michael Maddocks M-12604  
14/04/15