

**NIMBUS-3,
G-EENN**

**Portmoak Airfield,
Scotlandwell, Kinross**

04 September 2012

Accident

Investigation Synopsis

The glider was being winch launched from a grass airfield. At an early stage of the launch the right wing tip contacted the ground, the left wing lifted and the glider cartwheeled to the right before coming to rest, inverted. The pilot was fatally injured.

Three Safety Recommendations are made to the European Aviation Safety Agency and the British Gliding Association concerning cable release mechanisms.

Safety Recommendation 2013-008

Safety Recommendation 2013-008

It is recommended that the European Aviation Safety Agency amend the certification standard for Sailplanes and Powered Sailplanes (CS 22) to include the requirement that the cable release mechanisms can be operated at any stage of the launch without restricting the range of movement of any flying control.

Date Safety Recommendation made: 04 July 2013

LATEST RESPONSE

Response received: 02 December 2021

CS-22 (Certification Specifications for Sailplanes and Powered Sailplanes) states at CS 22.777(b) the following: 'The controls must be located and arranged so that the pilot, when strapped in the seat, has full and unrestricted movement of each control without interference from either clothing (including winter clothing) or from the cockpit structure. The pilot must be able to operate all the controls necessary for the safe operation of the aeroplane from the seat designated to be used for solo flying'.

This certification specification is generic and it does not specifically mention that it should be possible to operate the cable release mechanisms at any stage of the launch without being restricted by the range of movement of any flight controls.

In the frame of the European Union Aviation Safety Agency (EASA) rulemaking task RMT.0037 (Regular update of CS-22), EASA published Notice of Proposed Amendment (NPA) 2020-013 on 14 December 2020.

<https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2020-13>

This NPA made reference to this safety recommendation under item 2 and proposed a new AMC (Acceptable Means of Compliance) 22.777(b) to address the identified safety issue.

Following the NPA public consultation, EASA published on 17 September 2021 Executive Director Decision 2021/013/R amending CS-22 (CS-22 Amendment 3).

A new AMC 22.777(b) has been created that reads: "Special consideration should be given to ensuring that cable release mechanisms can be operated at any stage of the launch without restricting the range of movement of any flying control, including when the pilot has the hand on the release during the launch."

EASA Status: Closed - Agreement

Safety Recommendation Status **Closed**

AAIB Assessment **Adequate**

Action Status **Planned Action Completed**

RESPONSE HISTORY

Response received: 03 March 2021

In accordance with certification specification CS 22.777(b) 'The controls must be located and arranged so that the pilot, when strapped in the seat, has full and unrestricted movement of each control without interference from either clothing (including winter clothing) or from the cockpit structure. The pilot must be able to operate all the controls necessary for the safe operation of the aeroplane from the seat designated to be used for solo flying'.

This certification specification is generic and it does not specifically mention that it should be possible to operate the cable release mechanisms at any stage of the launch without being restricted by the range of movement of any flight controls.

However, in the frame of rulemaking task RMT.0037 (22.010) "Regular update of CS-22" the European Union Aviation Safety Agency (EASA) published notice of proposed amendment (NPA) 2020-013 on 14 December 2020 that, under item 2, takes into account this safety recommendation. <https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2020-13>.

In particular, the NPA proposes a new acceptable means of compliance (AMC) to 22.777(b) to address this feature. The proposal reads as follows "Special consideration should be given to ensuring that cable release mechanisms can be operated at any stage of the launch without restricting the range of movement of any flying control, including when the pilot has the hand on the release during the launch."
EASA Status: Open

AAIB Assessment – Adequate Closed

Response received: 22 May 2014

EASA supports the proposal to make a change to Certification Specifications (CS) CS-22 that introduces a specification for the cable release mechanism for sailplanes and powered sailplanes in line with the safety recommendation.

The plan is to develop this change in cooperation with the Organisation Scientifique et Technique du Vol à Voile (OSTIV) Sailplane Development Panel (SDP). Because this existing forum has the support and involvement of a high number of stakeholders, EASA intends to introduce the necessary change to CS-22 through rulemaking task RMT.0037 (22.010) 'Regular update of CS-22' that is already in the current EASA rulemaking programme 2017-2021. A Notices of Proposed Amendment (NPA) is planned to be published in 2nd quarter 2018

AAIB Assessment – Adequate Closed

Safety Recommendation 2013-009

Safety Recommendation 2013-009

It is recommended that the European Aviation Safety Agency require that Type Certificate holders of EASA Type Certificated gliders ensure, where practicable, that the cable release control can be operated at any stage of the launch without restricting the range of movement of any flying control.

Date Safety Recommendation made: 04 July 2013

LATEST RESPONSE

Response received: 02 December 2021

Certification Specifications for Sailplanes and Powered Sailplanes (CS-22) amendment 3 was issued by the European Union Aviation Safety Agency (EASA) on 15 September 2021 by Executive Director Decision 2021/013/R and includes a new Acceptable Means of Compliance AMC 22.777 (b) foreseeing that special consideration should be given to ensuring that the cable release mechanisms can be operated at any stage of the launch without restricting the range of movement of any flying control.

For the current fleet, EASA has not received further occurrence reports of similar events and will take safety action in accordance with its continuing airworthiness procedures in case other occurrences are reported.

EASA Status: Closed - Partial agreement

Safety Recommendation Status Closed

AAIB Assessment Partially Adequate

Action Status Planned Action Completed

Feedback rationale

The AAIB assesses that the EASA response is 'Partially Adequate'. The new CS-22 controls deal with future aircraft, but do not directly address this on existing aircraft. (EU Regulation 996/2010 article 18 refers).

RESPONSE HISTORY

Response received: 07 July 2017

The Agency assessed the issue and had identified the sailplane Types that are potentially affected, with the support of the Type Certificate Holders (TCH).

Following this investigation, the following actions will be pursued:

- EASA will issue within 2017 a Safety Information Bulletin (SIB) to make owners and pilots aware of the possible interference between the flight and the cable release controls. Owners/Pilots who identify their sailplane (specific serial number) being affected will be requested to get in contact with the respective TCH.

- A clearer and more specific wording of the Acceptable Means of Compliance (AMC) to Certification Specifications (CS) 22.777 'Cockpit Controls' has been developed and agreed by the external advisory body the International Scientific and Technical Soaring Organisation (OSTIV) and will be included by the next revision of CS-22.

AAIB Assessment – Adequate Closed

Response received: 22 May 2014

EASA is investigating the issue in cooperation with sailplane Type Certificate Holders in order to identify affected sailplane and possible retrofit. A rulemaking activity is planned (reference rulemaking task RMT.0037 (22.010) 'Regular update of CS-22').

Practical solutions and the way to implement them will be decided also taking into account the certification basis for these aircraft at the time of certification.

AAIB Assessment – Adequate Closed

(SRIS Reference: GB.SIA-2013-0009)

Safety Recommendation 2013-010

Safety Recommendation 2013-010

It is recommended that the British Gliding Association ensure that, where practicable, the cable release control on EASA Annex II gliders can be operated during any stage of the launch without restricting the range of movement of any flying control.

Date Safety Recommendation made: 04 July 2013

LATEST RESPONSE

Response received: 04 February 2014

In response to this action BGA, through its Technical Committee, have reviewed 77 Annex II types in UK, (cf. 86 types known to be active). Some 50% of these are UK types, including homebuilt airframes, and another 25% are of German origin. The remainder are predominantly of French and Polish origin. It has not been possible to review ALL physical installations and given the age of the airframes and designs (except homebuilds, all over 40 years old) there may remain non-standard installation. Nevertheless we believe we have covered a very high percentage of design examples.

It should be noted that these older sailplanes were generically designed with a more upright seating than modern low profile sailplanes, enabling a wider range of reach, particularly during launch phase when the pilot is exposed to significant fore and aft, and normal accelerations. In UK, BCAR practice had been to require a large (typically 3 to 4 cm diameter), yellow ball which was usually instrument panel mounted. Further, in traditional BGA design reviews accessibility of the release control was specifically addressed on design review. As recommended, releases handles have been reviewed for ease of function and accessibility, including a full range of use of all other controls. We are now able to confirm our full confidence in these designs.

While on non-UK types the installations tend to vary more widely, none of those reviewed appeared to raise specific individual concerns. We can confirm that ALL design examples reviewed, including those of non-UK origin, possess adequate access to the release control, under the circumstances set out by the AAIB recommendation.

Safety Recommendation Status Closed

AAIB Assessment Adequate

RESPONSE HISTORY

N/A

(SRIS Reference: GB.SIA-2013-0010)

Safety Recommendation 2013-010

Safety Recommendation 2013-010

It is recommended that the British Gliding Association ensure that, where practicable, the cable release control on EASA Annex II gliders can be operated during any stage of the launch without restricting the range of movement of any flying control.

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Safety Recommendation Status Closed

AAIB Assessment Adequate

RESPONSE HISTORY

N/A

(SRIS Reference: GB.SIA-2013-0010)