

Follow-up Action on Occurrence Report

**ACCIDENT TO CZAW SPORTCRUISER, G-EWZZ, AT KINGARTH AIRSTRIP,
ISLE OF BUTE ON 09 AUGUST 2014**

**FACTOR F3/2015 has been reissued to reflect the CAA's revised responses to Safety
Recommendations 2015-009 and 2015-010**

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TYPE OF FLIGHT : Private
CAA OCCURRENCE NUMBER : 201410639
AAIB REPORT : Bulletin 5/2015

SYNOPSIS

From AAIB Report

Shortly after takeoff from Runway 27 at Bute airstrip, the pilot reported that the engine appeared to lose power and the aircraft was no longer able to climb. With the area around the airfield unsuitable for a landing he attempted to return to the runway, but in doing so flew into the ground. The aircraft came to rest upside down in a ditch and caught fire. The pilot and passenger sustained serious burns from which the passenger later died. The aircraft was fitted with a ballistic parachute recovery system which had not been activated during the flight. However, the investigation highlighted a number of issues, concerning such systems, which present a risk to the aircraft occupants and first responders following an accident.

FOLLOW UP ACTION – CAA Recommendations only

Safety Recommendation 2015-009

It is recommended that the Civil Aviation Authority review the requirement for the placarding of aircraft referred to in Regulation (EC) 216/2008 Annex II, fitted with a Ballistic Parachute Recovery System, so that the warning placards contain information on the location of the rocket launcher and the actuating device, and can be read from a safe distance regardless of the stationary attitude of the aircraft.

CAA Response

The CAA accepts this Recommendation and undertakes to review requirements regarding placarding relative to location of BRS and actuating device fitted. However, it should be noted that current UK requirements are broadly harmonised with those applied by FAA to Cirrus (via Special Condition) and EASA (Proposed Special Condition for CS-VLA), and in the current climate of proportionality the CAA would seek to align with the requirements of the latter where possible. This action is planned to be completed by January 2016.

CAA Status – Open

Update July 2017

The CAA has reviewed the requirement for the placarding of BRS-equipped Annex II aircraft and is taking the following actions:

Retain existing requirements in Section S of the British Civil Airworthiness Requirements (BCAR Section S) for:

- Placards applied to the aircraft structure to be positioned such that at least one should remain visible regardless of the stationary attitude of the aircraft.
- The parachute release control to be identified and placarded; and

Amend Section S to introduce:

- A requirement to identify the area through which the rocket launcher exits the airframe.
- Standards for colours, minimum size and placement of placards and labels that align with those set out in International Standard Specification for Airframe Emergency Parachutes (ASTM F2316-12). The CAA and EASA consider these standards to be adequate to alert approaching personnel of the presence of a ballistic parachute recovery system from a reasonable distance and to quickly provide the information needed in most accident scenarios.

The proposals to amend BCAR Section S are currently being consulted upon by the BCAR Section S Working Group, which includes representatives from both the CAA and industry. The outcome of this consultation, and our proposal to amend BCAR Section S, will be completed by the end of November 2017. The CAA will then apply the agreed requirements to the wider Annex II fleet by means of Airworthiness Directives and Mandatory Permit Directives as applicable.

CAA Status – Open

Update December 2020

The CAA completed the consultation to amend CAP482; BCAR Section S and Issue 7 was released in December 2018.

The revision to Section S included, for new design and new installations, an amendment to Sub-Section K, Paragraph S 2041, 'Markings and Placards'. This amendment contains requirement material that both addresses the intent of this recommendation whilst also broadly according with international practice for this complexity of aircraft.

The CAA then applied the agreed requirements retrospectively to microlight designs already fitted with a Ballistic Parachute Recovery System (BPRS) via Mandatory Permit Directive MPD2019-005.

At this time, no Airworthiness Directives have been issued as there are no Annex I (previously Annex II) Certificate of Airworthiness types on the UK Register with BPRS installed.

CAA Status – Closed

Safety Recommendation 2015-010

It is recommended that the Civil Aviation Authority introduce the requirement that, for aircraft referred to in Regulation (EC) 216/2008 Annex II, the rocket-launcher in an aircraft Ballistic Parachute Recovery System is fitted in a position where it can be readily disarmed following an accident.

CAA Response

The CAA accepts this Recommendation and will compile some Administrative & Guidance Material to BCAR Section S (Sub-Section K), relating to location and ease of disarming of such systems. This action is planned to be completed by January 2016.

CAA Status – Open

Update July 2017

The CAA has reconsidered its response to this Safety Recommendation in light of the EASA response to 2015-007, which notes that requiring the rocket-launcher to be installed such that it can be readily disarmed in all possible post-crash scenarios could create design constraints that are incompatible with the proper functioning of the system. The CAA has therefore developed an amendment to BCAR Section S advising installation designers (in conjunction with system manufacturers) to:

- consider how (if it is achievable without compromising the basic functioning of the system) the rocket can be safely disarmed following an accident in which it was not fired
- provide clear information (available for first responders via contact details provided on warning placards) on how this may be achieved

The proposals are currently being consulted upon by the BCAR Section S Working Group, which includes representatives from both the CAA and from industry. The outcome of this consultation and our proposal to amend BCAR Section S will be completed by the end of November 2017.

CAA Status – Open

Update December 2020

The CAA completed the consultation to amend CAP482; BCAR Section S and Issue 7 was released in December 2018.

The revision to Section S included, for new design and new installations, an amendment to Sub-Section K, Paragraphs AMC S 2003(g) and S 2041(c). These amendments contain advisory and requirement material that both addresses the intent of this recommendation whilst also broadly according with international practice for this and complexity of aircraft.

CAA Status - Closed

Safety Recommendation 2015-011

It is recommended that the Civil Aviation Authority introduce an information system, for aircraft operating in the UK that allows first responders and accident investigators to identify if an aircraft is equipped with a Ballistic Parachute Recovery System. This information system should include details of the type of system fitted, the location of the major components, routing of the actuator cable and the actions required to make the system safe.

CAA Response

The CAA accepts this Recommendation and will undertake a review to determine the practicality of expanding G-INFO so that owners may add details appropriate to modifications to their specific aircraft. It should be noted that the CAA are not necessarily made aware of the embodiment of such modifications on an individual aircraft so could not guarantee its veracity, however in this way we may encourage owners to provide appropriate up to date information to potentially aid in their own rescue. This action is planned to be completed by September 2015.

CAA Status – Open

Update July 2017

The CAA has completed a review to determine practicality of expanding G-INFO so that owners may add details appropriate to modifications to their specific aircraft. This review included consultation with an independent fire and rescue subject matter expert and UK Fire and Rescue Service National Operational Guidance Programme.

The review found that the proposed updates to G-INFO would be unlikely to deliver significant safety benefits at the scene of an accident. The CAA was advised that G-INFO was unlikely to be used by first responders and would not assist a developing incident due to dynamic nature of any such event.

Additionally the CAA found a number of practical impediments to implementation of the proposed changes, including the difficulty in collating and ensuring that information remains current due to the reliance on aircraft owners/maintainers to declare modifications.

The CAA has therefore determined that it would be of greater safety benefit to support and seek to enhance existing hazard control methods set out for UK fire and rescue services.

Guidance provided by the National Operational Guidance Programme to assist first responders in the safe and effective response to incidents states that *'the first priority is to identify, from the exterior of the aircraft, the location and condition of the ballistic recovery systems on the aircraft, using signage, known locations, etc.'*

Under Safety Recommendation 2015-009, the CAA is proposing to enhance requirements for the placarding and identification of ballistic parachute recovery systems so as to increase awareness and visibility and assist first responders and accident investigators in identifying the presence of these systems following an accident. To further assist accident investigators the CAA will also explore the possibility of using G-INFO's photo upload facility to display information on ballistic parachute recovery installations in the future.

The CAA position is similar to that taken by the Federal Aviation Administration following the publication of National Transportation Safety Board (NTSB) Safety Recommendation A12-064, which called for similar action to be taken:

'TO THE FEDERAL AVIATION ADMINISTRATION: Require aircraft owners, during each triennial re-registration with the Federal Aviation Administration's aircraft registry, to identify the presence and type of safety devices (such as ejection seats, ballistic recovery systems, or inflatable restraints) that contain explosive components on the aircraft.'

The FAA found a number of practical impediments to implementation of the recommendation as written and after consideration of various alternative measures found responder training, education, and the placarding required to be sufficient.

CAA Status – Closed

Safety Recommendation 2015-012

It is recommended that the Civil Aviation Authority takes action to ensure that information on the risks from Ballistic Parachute Recovery Systems is disseminated to the emergency services operating in the United Kingdom.

CAA Response

The CAA accepts this Recommendation. When and if action in response to Recommendation 2015-011 is in place, it will undertake to issue an Information Notice to promote awareness. This action is planned to be completed by March 2016.

CAA Status – Open

Update July 2017

The CAA has determined that that it would not be practicable to expand G-INFO to address Safety Recommendation 2015-011 as originally intended and that G-INFO is not, in any case, used by first responders. The CAA has therefore reconsidered its response to this Safety Recommendation.

Information on the hazards associated with aircraft ballistic recovery systems is made available to UK fire and rescue services by the National Operational Guidance Programme, which provides guidance to assist in the safe and effective response to incidents. Guidance is also provided to the police, emergency services and airfield operators by the AAIB.

Additionally, the CAA, under CAP 699 has published a framework for the competence of aviation rescue and fire fighting services personnel, much of the content of which draws on National Occupational Standards, developed by Skills for Fire and Rescue in collaboration with the UK Fire and Rescue Services. This document advises that training programmes for aviation rescue and fire fighting services personnel should include initial and recurrent instruction in the recognition of aircraft ballistic parachute systems during emergency operations.

The CAA participated in the development of National Operational Guidance (NOG) for transport incidents involving aircraft. This NOG includes information on the hazards arising from aircraft ballistic parachute systems and the control measures. The NOG is subject to a periodic review cycle in which CAA will participate.

CAA Status - Closed