

Follow-up Action on Occurrence Report

ACCIDENT TO HAWKER HUNTER T7, G-BXFI, NEAR SHOREHAM AIRPORT, WEST SUSSEX, ON 22 AUGUST 2015

CAA FACTOR NUMBER : F1/2016
FACTOR PUBLICATION DATE : 08 April 2016
TYPE OF FLIGHT : Air Display
CAA OCCURRENCE NUMBER : 201511517
AAIB SPECIAL BULLETIN : S4/2015

SYNOPSIS

From AAIB Special Bulletin S4/2015

The aircraft was taking part in an air display at Shoreham Airport during which it conducted a manoeuvre with both a vertical and rolling component, at the apex of which it was inverted. Following the subsequent descent, the aircraft did not achieve level flight before it struck the westbound carriageway of the A27.

Seven Safety Recommendations are made.

Note: Special Bulletin S3/2015 was published on 4 September 2015 to provide preliminary information about the accident gathered from ground inspection, radar data, recorded images and other sources. This FACTOR is in response to **Special Bulletin S4/2015** which was published by the AAIB on 21 December 2015. This Special Bulletin highlighted findings of the AAIB investigation regarding ejection seat safety and the maintenance of ex-military jet aircraft, and to assist the Civil Aviation Authority in its 'Review of UK Civil Air Displays' announced on 9 September 2015.

FOLLOW UP ACTION

Recommendation 2015-041

It is recommended that the Civil Aviation Authority require operators of ex-military aircraft fitted with ejection seats or other pyrotechnic devices operating in the United Kingdom, to ensure that hazard information is readily available which includes contact details of a competent organisation or person able to make the devices safe following an accident.

CAA Response

The CAA accepts this recommendation. To ensure that hazard information is readily available for aircraft participating in flying displays, the CAA will amend the certificate supplied to the Flight Display Director by a pilot participating in a flying display to identify the pyrotechnic devices fitted to the aircraft and the contact details of a competent

organisation or person able to make the devices safe (or advise on doing so) following an accident. The revised form will be published before the end of April 2016 as part of an amendment to CAP 403.

The CAA is currently reviewing how best to ensure that the same information is readily available for aircraft not participating in flying displays. This review will be completed before the end of June 2016.

CAA Status – Open

Recommendation 2015-042

It is recommended that the Civil Aviation Authority review the guidance in CAP 632 with respect to ejection seats and the means by which operators of ex-military aircraft equipped with them comply with this guidance. This review should include:

- The benefits and hazards of aircrew escape systems in civilian operated aircraft
- The use of time-expired components
- The availability of approved spares
- The seat manufacturer's guidance on deactivating its historic products
- Adoption of a dedicated Maintenance Approval for persons or organisations competent to perform ejection seat maintenance

CAA Response

The CAA accepts this recommendation and is undertaking a review of ejection seat safety as part of the Air Display Review. This review includes consideration of each of the specific points highlighted by this recommendation and will be completed before the end of December 2016.

CAA Status - Open

Recommendation 2015-043

It is recommended that the Civil Aviation Authority promote a process for the effective dissemination of ex-military jet aircraft experience and type-specific knowledge between individual maintenance organisations.

CAA Response

The CAA accepts this recommendation. By December 2016, the CAA will establish and promote a process for the more effective dissemination of ex-military jet aircraft experience and type-specific knowledge between individual maintenance organisations.

CAA Status – Open

Recommendation 2015-044

It is recommended that the Civil Aviation Authority establish a minimum amendment standard for the technical publications for each ex-military jet aircraft operated on the United Kingdom civil register.

CAA Response

The CAA does not accept this recommendation. Each ex-military aircraft accepted by the CAA is on the basis of its individual build and modification standards and as such, examples of the same type may be operated and maintained to different manual amendments perfectly justifiably – it may not be desirable or even possible to establish a minimum standard for each publication.

However, the sharing of information at type or class forums and the review of maintenance programmes mentioned in the Air Display Review may result in some aircraft adopting a later standard of publication, where appropriate.

CAA Status - Closed

Recommendation 2015-045

It is recommended that the Civil Aviation Authority require that the maintenance programme relating to an ex-military jet aircraft is transferred with the aircraft when it moves to another maintenance organisation to ensure continuity of the aircraft's maintenance.

CAA Response

The CAA does not accept this recommendation. The maintenance programme for an individual aircraft is customised to the particular operation of the aircraft at a given time so continuity may not always be appropriate. This is not unique to the ex-military aircraft community but is common across the aviation industry.

The maintenance programme is the proprietary information of its author(s), though an organisation may opt to transfer it with an aircraft. The owner and maintenance organisation to which an aircraft is transferred are required to establish a maintenance programme that is suitable for the aircraft, with consideration to its operation and previous maintenance history, which is recorded in the logbooks and technical records that are transferred upon a change of ownership and/or maintenance organisation. The CAA considers that this facilitates an appropriate level of continuity of the aircraft's maintenance, where appropriate.

CAA Status - Closed

Recommendation 2015-046

It is recommended that the Civil Aviation Authority review the effectiveness of all approved Alternative Means of Compliance to Mandatory Permit Directive 2001-001.

CAA Response

The CAA does not accept this recommendation. There have been no changes to the design of the engine, nor any inadequacy in the effectiveness of associated inspection and monitoring methods identified.

CAA Status – Closed

Recommendation 2015-047

It is recommended that the Civil Aviation Authority review its procedures to ensure that a 'Permit to Fly-Certificate of Validity' is valid when it is issued.

CAA Response

The CAA does not accept this recommendation. The procedure to ensure that a 'Permit to Fly-Certificate of Validity' is valid when issued sits with the approved organisation as set out below. Where a Certificate of Validity is recommended by such an organisation for issue by the CAA, the CAA conducts a quality check to verify the technical and editorial content of the Certificate in accordance with the supporting information provided by the applicant.

An organisation approved by the CAA to conduct an airworthiness review on such aircraft is granted the privilege, under its approval, to declare to the CAA that a particular aircraft complies with the requirements of BCAR Section A Chapter A3-7, which includes completing a physical survey of the aircraft and a documented review of its records to determine its airworthiness status. The CAA, under the current oversight regime, is not required to validate the work carried out under this approval before a Certificate of Validity is issued.

An organisation's compliance with these requirements, including the adequacy of declarations, is audited as part of CAA's continued surveillance activity.

The current process is consistent with that in place for both National and EASA aircraft operating under a Certificate of Airworthiness.

CAA Status – Closed