



Civil Aviation Authority

PROPOSED AIRWORTHINESS DIRECTIVE



Number: 1997

Issue date: 25 April 2022

In accordance with the CAA Continuing Airworthiness Procedures, the issuance of an Airworthiness Directive (AD) is proposed which will be applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Type Approval Holder's Name:

Type/Model Designation(s):

BAE SYSTEMS (OPERATIONS) LIMITED

BAe ATP

Effective Date:	<i>TBD upon issue of final AD</i>
TCDS:	EASA.A.192
Foreign AD (if applicable):	Not Applicable
Supersedure:	Not Applicable

ATA 31 – Indicating / Recording Systems – Flight Data Recording System – Check

Manufacturer(s):

British Aerospace plc, British Aerospace (Commercial Aircraft) Ltd, Jetstream Aircraft Ltd, British Aerospace Regional Aircraft, British Aerospace (Operations) Ltd and BAE Systems (Operations) Ltd

Applicability:

BAe ATP aeroplanes, all manufacturer serial numbers (MSN)

Definitions:

For the purposes of this AD, the following definitions apply:

BAE: BAE Systems (Operations) Ltd

LFD: Large Freight Door

FDR: Flight Data Recorder

DARU: Data Acquisition and Recording Unit

Reason:

During investigation by UK AAIB of a Serious Incident involving an ATP aircraft, it was found that “Both FDR and QAR recordings ended prior to the aircraft landing and an intermittent recording fault was identified with the FDR.”

The AAIB Bulletin states; “*The majority of FDRs found with moisture ingress were those that had been fitted to BAe ATP aircraft with the Large Freight Door (LFD). Discussions with engineers, and inspection of SE-MHF, indicate that rainwater can enter the cargo bay area during loading, which may then find its way into the rear equipment bay and the FDR*” “*Therefore, to minimise the effects of moisture ingress on the performance of the FDR fitted to the ATP, the following Safety Recommendation is made:*

Safety Recommendation 2019-001

It is recommended that the European Union Aviation Safety Agency (EASA) require BAE SYSTEMS to protect the flight data recorder fitted to those ATP aircraft equipped with large freight doors from the effects of rainwater and other liquids.”

As a result of these findings BAE have issued Service Bulletin ATP-31-027 which increases the frequency of existing instructions for FDR / DARU data download. BAE are also working to develop a modification to provide protection of the FDR / DARU against moisture ingress. Whilst this is in progress, this AD requires a reduction in the interval of periodic data download of the FDR / DARU to confirm correct functioning of this equipment.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

- (1) Within 3 months from the effective date of this AD, and every 6 months thereafter, perform an FDR/DARU data download and read out in accordance with SB ATP-31-027 / MPD Task 313102-RDG-10000-1, to verify the correct functioning of the FDR / DARU.

Whilst performing the FDR/DARU data download, check and report back to BAe Systems any signs of water/moisture that might have percolated through and dripped onto the FDR/DARU from the cargo bay floor. Make sure that the area is dry before closing up.

Operator Feedback

- (2) After each download and inspection in accordance with (1) above, any findings must be reported to BAE, at the address stated in Note 4. below.

Reference Publications:

BAE Systems (Operations) Ltd Service Bulletin ATP-31-027 Original Issue, dated 22 February 2022

The use of later approved revisions of the above-mentioned document is acceptable for compliance with this AD.

Remarks:

1. This PAD will be closed for consultation on 23 May 2022.
2. Information about any failures, malfunctions, defects, or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, can be reported to the CAA aviation safety reporting system. This may include reporting on the same or similar components, other than those covered by the design to which this PAD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
3. Enquiries regarding this PAD should be referred to: Continued.Airworthiness@caa.co.uk
4. For any questions concerning the technical content of the requirements in this PAD, please contact: BAE Systems (Operations) Ltd, Customer Technical Support Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, The United Kingdom or E-mail: raengliaison@baesystems.com