



Civil Aviation Authority

PROPOSED AIRWORTHINESS DIRECTIVE



Number: 1988

Issue date: 10 December 2021

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) LTD

BAe 146 aeroplanes

Effective Date:	(TBD upon issue of final AD)
TCDS:	EASA.A.182 UK CAA BA29
Foreign AD:	Not applicable
Supersedure:	Not applicable

ATA 22 - Auto Flight – Autopilot Disconnect – Modification

Manufacturer(s):

BAE Systems (Operations) Ltd

Applicability:

BAe 146 aeroplanes, all models, all serial numbers.

Definitions:

None.

Reason:

UK AAIB report 2/2016 describes its investigation into a serious incident involving SAAB 2000 G-LGNO. The report includes Safety Recommendation 2016-051, which recommends that EASA “review the autopilot system designs of aircraft certified under Part 25 or equivalent regulations and require modification if necessary to ensure that the autopilot does not create a potential unsafe hazard when the flight crew applies an override force to the flight controls.” Though BAE Systems has received no reports of BAe146 pilots attempting to override the autopilot, the architecture of the autopilot system is such that with the autopilot engaged, the autopilot does not automatically

disconnect in response to pilot application of a pitch input or when the electric pitch trim switch on either pilot control wheel is operated.

In order to address the safety concerns of Safety Recommendation 2016-051, BAE Systems have issued All Operator Message 20-027V-1 and Flight Operations Support Information Leaflet 20-016 to inform BAe 146 operators of this potential unsafe condition and recommend pilots check the autopilot status before applying manual inputs.

In addition, Service Bulletin (SB) 22-072-36262A, initial issue dated 14 September 2021, has been published to introduce a modification to the autopilot disconnect logic to ensure disconnection when the electric pitch trim switch on either pilot control wheel is operated and thus prevent the potential unsafe condition.

For the reason described above, this AD is issued to require embodiment of the modification described in SB 22-072-36262A.

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

Required as indicated, unless accomplished previously:

Modification:

- (1) Within 12 months after the effective date of this AD, modify the autopilot engagement circuit (achieved through aircraft wiring changes) in accordance with Service Bulletin 22-072-36262A.

Reference Publications:

Service Bulletin: SB. 22-072-36262A, initial issue dated 14 September 2021

All Operator Message: AOM 20-027V-1

Flight Operations Support Information Leaflet 20-016

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

Remarks:

- (1) This PAD will be closed for consultation on 07 January 2022.
- (2) Enquiries regarding this PAD should be referred to: Continued.Airworthiness@caa.co.uk
- (3) Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the CAA aviation safety reporting system [Occurrence reporting | UK Civil Aviation Authority \(caa.co.uk\)](https://www.caa.co.uk/occurrence-reporting). This may include reporting on the same or similar components, other than those covered by the design to which this AD 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.
- (4) For any question 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, United Kingdom or E-mail: RaEnliaison@baesystems.com