



Civil Aviation Authority

AIRWORTHINESS DIRECTIVE

Number: G-2022-0002

Issue date: 11 February 2022



Note: In this Airworthiness Directive, references to EU regulations are to those regulations as retained and amended in UK domestic law under the European Union (Withdrawal) Act 2018 and are referenced as "UK Regulation (EU) year/number or UK Regulation (EU) No. number/year".

This Airworthiness Directive (AD) is issued by the UK CAA in accordance with UK Regulation (EU) No. 748/2012 Part 21.A.3B, acting as the Authority of the State of Design for the affected product(s), under Article 34 of the Air Navigation Order 2016 (ANO) and UK Regulation (EU) 2018/1139.

In accordance with UK Regulation (EU) No. 1321/2014 Annex I (Part-M), M.A.301 / Annex VB (Part-ML), ML.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified or agreed by the CAA [Part-M, M.A.303 / Part-ML, ML.A.303].

Type Approval Holder's Name:

BAE SYSTEMS (OPERATIONS) LTD

Type/Model Designation(s):

BAe 146 aeroplanes

Effective Date:	25 February 2022
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, British Aerospace plc, British Aerospace (Commercial Aircraft) Ltd, British Aerospace (Operations) Ltd, British Aerospace Regional Aircraft Ltd, British Aerospace Regional Aircraft trading as AVRO International Aerospace.

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 AD was originally posted on 10 December 2021 as PAD 1988 for consultation until 7 January 2022. No comments were received during the consultation period.
2. Enquiries regarding this AD 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](#). 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 AD, please contact: BAE Systems (Operations) Ltd Customer Technical Support Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom or E-mail: RaEnqliaison@baesystems.com