EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2010-0046R1 **Date: 23 May 2012** Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with EC 1702/2003, Part 21A.3B. In accordance with EC 2042/2003 Annex I, Part M.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 by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].

Type Approval Holder's Name :	**Type/Model designation(s) :**
AIRBUS	A318, A319, A320 and A321 aeroplanes

TCDS Number :	EASA.A.064
Foreign AD :	Not applicable
Revision:	This AD revises EASA AD 2010-0046 dated 19 March 2010, which superseded EASA AD 2008-0149 dated 05 August 2008.
ATA 27	**Flight Controls – Elevator Servo-Control Rod Eye-end – Inspection**
Manufacturer(s):	Airbus (formerly Airbus Industrie)
Applicability:	Airbus A318-111, A318-112, A318-121, A318-122, A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-111, A320-211, A320-212, A320-214, A320-215, A320-216, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231 and A321-232 aeroplanes models, all manufacturer serial numbers.
Reason:	One case of elevator servo-control disconnection was experienced on an aeroplane of the A320 family. Investigation results revealed that the failure occurred at the servo-control rod eye-end. Further to this finding, additional inspections revealed cracking at the same location on a number of other servo-control rod eye-ends. In several cases, both actuators of the same elevator surface were affected. The root cause of the cracking has not yet been determined and tests are ongoing. A dual servo-control disconnection on the same elevator could result in an uncontrolled surface, the elevator surface being neither actuated nor damped, which could lead to reduced control of the aeroplane. To address this unsafe condition, EASA AD 2008-0149 was issued to require a one-time inspection of the elevator servo-control rod eye-ends for aeroplanes which have accumulated more than 10 000 total flight cycles (FC) since aeroplane first flight and, in case of findings, the accomplishment of corrective actions. As a result of this one-time inspection campaign, a significant number of rod eye-ends were found cracked.

	In addition, some cracks were reported on rod eye-ends that had not yet accumulated the 10 000 FC of the established threshold. Prompted by these findings, EASA issued AD 2010-0046, which partially retained the initial inspection requirement of EASA AD 2008-0149, which was superseded, reduced the compliance time of the initial inspection and introduced a repetitive inspection programme. EASA AD 2010-0046 is now revised to specify that the accomplishment of repetitive inspections and corrective actions at elevator servo control rod eye-end part level can be an acceptable alternative method to comply with the actions required by this AD. In addition, some editorial changes have been made (Table 1) for reasons of standardisation.
Effective Date:	Revision 1: 06 June 2012 Original issue: 02 April 2010
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: (1) For aeroplanes which, on 19 August 2008 [the effective date of EASA AD 2008-0149], have accumulated 10 000 total FC or more since aeroplane first flight: (1.1) Within 1 500 FC after 19 August 2008 [the effective date of EASA AD 2008-0149], inspect both left-hand (LH) and right-hand (RH) **inboard** elevators servo-control rod eye-ends in accordance with the instructions of Airbus Service Bulletin (SB) A320-27A1186 Revision 05. (1.2) Within 3 000 FC after 19 August 2008 [effective date of EASA AD 2008-0149], inspect both LH and RH **outboard** elevators servo-control rod eye-ends in accordance with the instructions of Airbus SB A320-27A1186 Revision 05. (2) For aeroplanes other than those identified in paragraph (1) of this AD, within the compliance time specified in Table 1 of this AD, as applicable, inspect both LH and RH **inboard** and **outboard** elevators servo-control rod eye-ends in accordance with the instructions of Airbus SB A320-27A1186 Revision 05.

Table 1

Elevators servo-control rod eye-ends to be inspected	Compliance time, whichever occurs later
Inboard	Before accumulating 5 000 FC since aeroplane first flight, or within 20 months after 02 April 2010 [the effective date of the original issue of this AD] without exceeding 11 500 FC since aeroplane first flight
Outboard	Before accumulating 7 500 FC since aeroplane first flight, or within 40 months after 02 April 2010 [the effective date of the original issue of this AD] without exceeding 13 000 FC since aeroplane first flight

(3) **Deleted** – Merged into paragraph (4) requirements.

(4) For all aeroplanes, within 5 000 FC after the initial inspection as required by paragraph (1) or (2) of this AD, as applicable, and thereafter at intervals not to exceed 5 000 FC, repeat the inspections of both LH and

	RH **inboard** and **outboard** elevators servo-control rod eye-ends in accordance with the instructions of Airbus SB A320-27A1186 Revision 05. (5) If, during any inspection as required by paragraph (1), (2) or (4) of this AD, discrepancies are detected, before next flight, accomplish the applicable corrective actions in accordance with the instructions of Airbus SB A320-27A1186 Revision 05. (6) Aeroplanes that have passed the inspections of the LH and RH inboard or outboard elevators servo-control rod eye-ends, prior to 02 April 2010 [the effective date of the original issue of this AD], in accordance with the instructions of Airbus All Operators Telex (AOT) A320-27A1186 at original issue or any later revision, are compliant with the requirements of paragraph (1) or (2) of this AD, as applicable. The repetitive inspections required by paragraph (4) of this AD remain applicable. (7) From 02 April 2010 [the effective date of the original issue of this AD], do not install an elevator servo-control rod eye-end on an aeroplane, unless the part is new, or it has been determined (see paragraph (8) of this AD) that the part has not yet accumulated 5 000 FC since new or since its last inspection in accordance with Airbus SB A320-27A1186 Revision 05 or Goodrich SB 31075-27-21 Revision 2 or Airbus AOT 27A1186 at original issue, on the conditions that the FC accumulated by the elevator servo-control rod eye-end are conclusively determined from the review of aeroplane maintenance records and that thereafter, the installed elevator servo-control rod eye-end is inspected and, depending on findings, corrected in accordance with the requirements of this AD. (8) Accomplishment of the inspections and corrective actions on each elevator servo-control rod eye-end before the accumulation of 5 000 FC since first flight, and thereafter at intervals not to exceed 5 000 FC, in accordance with the instructions of Airbus SB A320-27A1186 Revision 5, or Goodrich SB 31075-27-21 Revision 2, or Airbus AOT A320-27A1186, is an acceptable method to comply with the requirements of paragraphs (1), (2), (4) and (5) of this AD, as applicable, provided that the FC accumulated by the elevator servo-control rod eye-end are conclusively determined from the review of aeroplane maintenance records. (9) Corrective actions, as required by paragraph (5) of this AD, do not constitute terminating action for the repetitive inspections as required by paragraph (4) of this AD.
Ref. Publications:	Airbus AOT A320-27A1186 original issue, dated 23 June 2008. Airbus SB A320-27A1186 Revision 05, dated 10 March 2010. Goodrich SB 31075-27-21 Revision 2 dated 04 March 2010. The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
Remarks :	1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS – Airworthiness Office – EAS Fax +33 5 61 93 44 51, E-mail: account.airworth-eas@airbus.com.