



Airworthiness Directive

AD No.: 2017-0181

Issued: 18 September 2017

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, 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 Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 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 [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:

EADS-CASA

Type/Model designation(s):

CN-235 and C-295 aeroplanes

Effective Date: 02 October 2017

TCDS Number(s): EASA.A.186

Foreign AD: Not applicable

Supersedure: None

ATA 52 – Doors – Nose Landing Gear Door Actuator Shaft Assembly – Inspection

Manufacturer(s):

EADS-CASA, formerly Construcciones Aeronáuticas S.A. (CASA)

Applicability:

CN-235, CN-235-100, CN-235-200, CN-235-300 and C-295 aeroplanes, all manufacturer serial numbers.

Reason:

Cracks were reportedly found on nose landing gear (NLG) door actuator shaft assemblies on CN-235 aeroplanes. The subsequent design review determined that combined or multiple rupture of the affected shaft assembly could occur, without this being signalled to the flight crew.

This condition, if not detected and corrected, could lead to an in-flight NLG door opening, possibly resulting in detachment of the affected door, with consequent damage to, or reduced control of, the aeroplane and injury to persons on the ground.

To address this unsafe condition, Airbus Defence & Space (D&S) issued Alert Operators Transmissions AOT-CN235-32-0001 Revision (Rev.) 2 and AOT-C295-32-0001 Rev. 2 to provide inspection instructions.



For the reasons described above, this AD requires repetitive detailed (DET) or special detailed inspections of the NLG door actuator shaft assembly, as applicable, and, depending on findings, corrective actions. This AD also introduces a modification for CN-235 aeroplanes as (optional) terminating action for the repetitive inspections as required by this AD.

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

Required as indicated, unless accomplished previously:

Note 1: Airbus D&S AOT-CN235-32-0001 Rev. 2 and AOT-C295-32-0001 Rev. 2, as applicable to aeroplane model, is hereafter referred to as “the AOT” in this AD.

Note 2: For the purpose of this AD, the NLG door mechanism actuator shaft assembly Part Number (P/N) 35-42311-00 or P/N 95-42315-00, as applicable to aeroplane model, is hereafter referred to as the “affected assembly”.

Inspection(s):

- (1) Before exceeding 600 flight hours (FH) accumulated by a NLG mechanism lever or cam since new, or within 60 FH after the effective the of this AD, whichever occurs later, and thereafter, at intervals not to exceed the values as defined in Table 1 of this AD, as applicable, depending on corrective action (or not) after the previous inspection (see paragraph (3) or (4) of this AD, as applicable), accomplish a DET of the NLG mechanism levers and cams of the affected assembly with the NLG actuator shaft installed in accordance with the instructions of the AOT.

Table 1 – NLG mechanism levers and cams repetitive inspection intervals

Findings / Corrective action applied	Interval
NLG door vibration observed	150 FH
No findings	300 FH
Damaged components replaced	
NLG door actuator shaft assembly replaced by new assembly	600 FH

- (2) Before exceeding 1 800 FH accumulated by the NLG door shaft of the affected assembly since new or within 60 FH after the effective date of this AD, whichever occurs later, and thereafter, at intervals not to exceed the values defined in Table 2 of this AD, depending on inspection method selected during the latest inspection, accomplish rototest inspection or DET of the NLG actuator shaft in accordance with the instructions of the AOT.

Table 2 – NLG actuator shaft repetitive inspection intervals

Inspection method	Interval
Rototest	900 FH
DET	600 FH



Corrective Action(s):

- (3) If, during any DET as required by paragraph (1) of this AD, any crack of 18 mm or more is detected, before next flight, replace the damaged component(s), or replace the NLG door actuator shaft assembly with a serviceable part, in accordance with the instructions of the AOT.
- (4) If, during any DET as required by paragraph (1) of this AD, a crack of less than 18 mm is detected, within 5 flight cycles after the DET when the defect was detected, replace the damaged component(s), or replace the NLG door actuator shaft assembly with a serviceable part, in accordance with the instructions of the AOT.
- (5) If, during any rototest or DET as required by paragraph (2) of this AD, any crack is detected, before next flight, replace the NLG door shaft with a serviceable part in accordance with the instructions of the AOT.

Parts Installation:

- (6) From the effective date of this AD, installation on an aeroplane of an NLG door mechanism actuator shaft assembly P/N 35-42311-00 or P/N 95-42315-00, or any of its components, is allowed, provided that the part is new, or the assembly or the component(s), as applicable, has passed an inspection in accordance with the instructions of the AOT.

Credit:

- (7) Inspections and corrective actions, accomplished on an aeroplane before the effective date of this AD in accordance with the instructions of Airbus D&S AOT-CN235-32-0001 original issue or Rev. 1, or AOT-C295-32-0001 original issue or Rev. 1, as applicable, are acceptable to comply with the initial requirements of paragraph (1), (3) or (4) of this AD for that aeroplane.

Terminating Action:

- (8) Accomplishment of corrective action(s) on an aeroplane, as required by paragraph (3), (4) or (5) of this AD, as applicable, does not constitute terminating action for the repetitive DET or rototests, as required by paragraphs (1) and (2) of this AD for that aeroplane.
- (9) Modification of a CN-235 aeroplane in accordance with the instructions of Airbus D&S SB 235-32-0031 constitutes terminating action for repetitive inspections, as required by paragraphs (1) and (2) of this AD for that aeroplane.

Ref. Publications:

Airbus D&S AOT-CN235-32-0001 original issue dated 29 September 2015, or Rev. 1 dated 19 February 2016, or Rev. 2 dated 26 October 2016.

Airbus D&S AOT-C295-32-0001 original issue dated 29 September 2015, or Rev. 1 dated 19 February 2016, or Rev. 2 dated 26 October 2016.

Airbus D&S SB 235-32-0031 original issue dated 22 September 2016.

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. This AD was posted on 14 June 2017 as PAD 17-076 for consultation until 12 July 2017 and republished on 04 August 2017 as PAD 17-076R1 for additional consultation until 01 September 2017. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. For any question concerning the technical content of the requirements in this AD, please contact:
Airbus Defence and Space
Services / Engineering Support
e-mail: MTA.TechnicalService@airbus.com.
Fax: +34 91 585 3127

For US operators, contact alternatively:
e-mail: TechnicalSupport@airbusmilitaryna.com.

