



Airworthiness Directive

AD No.: 2016-0006

Issued: 12 January 2016

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 aeroplanes

Effective Date: 26 January 2016

TCDS Number(s): EASA.A.186

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2014-0262 dated 05 December 2014.

ATA 76 – Engine Controls – Engine Control System Cables / Teleflex Cables – Replacement

Manufacturer(s):

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

Applicability:

CN-235, CN-235-100 and CN-235-200 aeroplanes, manufacturer serial numbers C-001 to C-074 inclusive.

Reason:

Three occurrences of cable disruption were reported in 1999. The failed parts, having a part number (P/N) 7-44728-20, were part of the engine control system assembly P/N 7-44728-12. Two cables were connected to the Power Lever and one cable to the Condition Lever control. Service records of the affected parts showed that each cable accumulated more than 14 000 flight cycles (FC). The subsequent investigation determined that the disruption was attributed to fatigue related crack.

This condition, if not corrected, could lead to failure of an engine control cable, possibly resulting in reduced control of the aeroplane.

Prompted by this unsafe condition, DGAC Spain issued AD 03/00 to require rigging of the throttle stops, and one-time replacement of the affected engine control cable assembly (P/N 7-44728-12), or the affected cable (P/N 7-44728-20) before exceeding 12 000 FC.



After that AD was issued, a new occurrence of cable (P/N 72830-20) failure was reported. In that case, the affected cable was part of the Condition Lever control and had accumulated 8 497 flight hours (FH) and 8 858 FC. Fractographic analysis of the affected cable identified that the fatigue nucleation seemed to have been induced by micro-cracks along the cable surface. Additionally, another case of control cable (P/N 72830-20) failure was reported, where the affected part accumulated 9 936 FH and 10 552 FC and was part of the Power Lever control. Investigation of the latter case identified again a fatigue nucleation to be the cause of the cable failure.

To address this potentially unsafe condition, Airbus Military issued Alert Operators Transmission (AOT) AOT-CN235-76-0001 to provide a repetitive replacement interval and instructions, and EASA issued AD 2014-0262, applicable to Model CN-235-100 and -200 aeroplanes, to impose that life limitation.

Since that AD was issued, it was determined that Model CN-235 aeroplanes are also affected by this unsafe condition and these aeroplane were originally addressed by DGAC Spain AD 03/00.

For the reasons described above, this AD retains the requirements of EASA AD 2014-0262, which is superseded, but expands the Applicability to include CN-235 aeroplanes.

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

Required as indicated, unless accomplished previously:

- (1) Within 15 days after 12 April 2000 [the effective date of DGAC Spain AD No 03/00], accomplish a rigging of the throttle stops in accordance with the instructions of CASA COM 235-140.
- (2) Within the threshold as defined in Table 1 or Table 2 of this AD, as applicable, and, thereafter, at intervals not to exceed 5 000 FC accumulated by a Teleflex cable P/N 72830-20, replace each Power Lever and Condition Lever Teleflex cable P/N 72830-20 with a serviceable part in accordance with the instructions of Airbus Military AOT-CN235-76-0001.



Table 1 – CN-235-100 and CN-235-200 aeroplanes
Teleflex Cable Replacement Threshold

FC accumulated by Teleflex cable P/N 72830-20 [on 19 December 2014, the effective date of EASA AD 2014-0262]	Compliance Time (since first installation on an aeroplane)
Less than 4 700 FC	Before exceeding 5 000 FC
Equal to or more than 4 700 FC but less than 6 000 FC	Within 300 FC or 12 months after 19 December 2014 [the effective date of AD 2014-0262], whichever occurs first
Equal to or more than 6 000 FC but less than 7 000 FC	Within 200 FC or 6 months after 19 December 2014 [the effective date of AD 2014-0262], whichever occurs first
Equal to or more than 7 000 FC	Within 100 FC or 3 months after 19 December 2014 [the effective date of AD 2014-0262], whichever occurs first

Table 2 – CN-235 aeroplanes
Teleflex Cable Replacement Threshold

FC accumulated by Teleflex cable P/N 72830-20 on the effective date of this AD	Compliance Time (since first installation on an aeroplane)
Less than 4 700 FC	Before exceeding 5 000 FC
Equal to or more than 4 700 FC but less than 6 000 FC	Within 300 FC or 12 months after the effective date of this AD, whichever occurs first
Equal to or more than 6 000 FC but less than 7 000 FC	Within 200 FC or 6 months after the effective date of this AD, whichever occurs first
Equal to or more than 7 000 FC	Within 100 FC or 3 months after the effective date of this AD, whichever occurs first

(3) Installation of a Teleflex cable P/N 72830-20 on an aeroplane is allowed, provided the part is new, or has accumulated less than 5 000 FC since its first installation on an aeroplane, as required by paragraph (3.1) or (3.2) of this AD, as applicable.

(3.1) For CN-235-100 and CN-235-200 aeroplanes: From 19 December 2014 [the effective date of AD 2014-0262].

(3.2) For CN-235 aeroplanes: From the effective date of this AD.

Ref. Publications:

CASA COM 235-140 revision 01, dated 21 March 2000.

Airbus Military AOT-CN235-76-0001 original issue, dated 27 May 2014.

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 27 November 2015 as PAD 15-147 for consultation until 25 December 2015. 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:
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