



Airworthiness Directive

AD No.: 2016-0010R1

Issued: 16 February 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:

AIRBUS

Type/Model designation(s):

A318, A319, A320 and A321 aeroplanes

Effective Date: Revision 1: 18 February 2016
Original Issue: 27 January 2016

TCDS Number(s): EASA.A.064

Foreign AD: Not applicable

Revision: This AD revises EASA AD 2016-0010 dated 13 January 2016, which superseded EASA AD 2015-0021 dated 13 February 2015.

ATA 71 – Powerplant – Aft Engine Mount Retainers – Inspection / Replacement

Manufacturer(s):

Airbus (formerly Airbus Industrie)

Applicability:

Airbus A318-111, A318-112, A319-111, A319-112, A319-113, A319-114, A319-115, A320-211, A320-212, A320-214, A320-215, A320-216, A321-111, A321-112, A321-211, A321-212, and A321-213 aeroplanes, all manufacturer serial numbers

Reason:

During in-service inspections, several aft engine mount inner retainers, fitted on aeroplanes equipped with CFM56-5A/5B engines, have been found broken. The results of the initial investigations highlighted that two different types of surface finish had been applied (respectively bright and dull material finishes), and that dull finish affects the strength of the retainer with regard to fatigue properties of the part. The pins which attach the engine link to the aft mount are secured by two nuts, which do not have a self-locking feature; this function is provided by the retainer brackets. In case of failure of the retainer bracket, the locking feature of the nuts of the inner and outer pins is lost; as a result, these nuts could subsequently become loose.



In case of full loss of the nuts, there is the potential to also lose the pins, in which case the aft mount link will no longer be secured to the aft engine mount. The same locking feature is used for the three link assemblies of the aft mount.

This condition, if not detected and corrected, could lead to in-flight loss of an aft mount link, possibly resulting in damage to the aeroplane and/or injury to persons on the ground.

To address this potential unsafe condition, EASA issued AD 2013-0050 to require a detailed inspection (DET) of the aft engine mount inner retainers and the replacement of all retainers with dull finish with retainers having a bright finish. Since that AD was issued, inspection results showed that the main cause of crack initiation remains the vibration dynamic effect that affects both retainers, either with "dull" or "bright" surface finishes. The non-conforming "dull" surface's pitting is an aggravating factor. Consequently, EASA issued AD 2015-0021, retaining the requirements of EASA AD 2013-0050, which was superseded, and requiring repetitive DET of all aft engine mount inner retainers and, depending on findings, their replacement.

Since that AD was issued, a production quality deficiency was identified by Airbus and UTAS (formerly Goodrich Aerostructures, the engine mount retainer manufacturer) on the delivery of the inner retainer, Part Number (P/N) 238-0252-505, installed in the three Link assemblies of the engine mount fitted on CFM56-5A/5B engines. Airbus issued AOT A71N011-15 and SB A320-71-1070 providing a list of affected parts and applicable corrective actions.

Consequently, EASA issued AD 2016-0010, retaining the requirements of EASA AD 2015-0021, which was superseded, and in addition requiring the identification and replacement of all non-conforming aft engine mount inner retainers.

Since that AD was issued, AOT A71N011-15 was revised, removing errors and reducing the list of affected parts.

For the reason described above, this AD is revised, adding reference to the revised AOT, and removing AD appendixes, which content is included in the referenced Airbus documentation.

This AD is still considered to be an interim action, pending development and availability of a final solution.

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

Required as indicated, unless accomplished previously:

Restatement of the requirements of EASA AD 2015-0021:

- (1) Within 3 months after the 19 March 2013 [the effective date of EASA AD 2013-0050], accomplish a DET of the aft engine mount inner retainers in accordance with the instructions of Airbus Alert Operators Transmission (AOT) A71N001-12 Revision 01.
- (2) If, during the DET as required by paragraph (1) of this AD, any installed dull finish aft engine mount inner retainer is found without cracks and not failed, within 25 flight cycles (FC), repeat the DET as required by paragraph (1) of this AD and, within 50 FC after the first DET as



required by paragraph (1) of this AD, replace all dull finish inner retainers in accordance with the instructions of Airbus AOT A71N001-12 Revision 01.

- (3) If, during the DET as required by paragraph (1) of this AD, any installed aft engine mount inner retainer is found cracked or failed, before next flight, replace all affected aft engine mount inner retainers in accordance with the instructions of Airbus AOT A71N001-12 Revision 01.
- (4) Aeroplanes from MSN 4942 and higher have been delivered by Airbus with “bright” finish aft engine mount retainers. These aeroplanes are not affected by the requirements of paragraph (1) of this AD, provided it is determined that no engine and/or no aft engine mount inner retainer has been removed from the aeroplane since Airbus date of manufacture. A review of aeroplane maintenance records is acceptable to make this determination, provided those records can be relied upon for the purpose of this requirement.
- (5) From 19 March 2013 [the effective date of EASA AD 2013-0050], do not install any dull finish aft engine mount inner retainer on an aeroplane. The instructions of Airbus AOT A71N001-12, or those of Goodrich Service Bulletin (SB) RA32071-146, can be used to verify the correct finish of the part.
- (6) Within the compliance time as specified in Table 1 of this AD, as applicable, and, thereafter, at intervals not to exceed 12 months, accomplish a DET of the aft engine mount inner retainers in accordance with the instructions of Airbus SB A320-71-1060, or Goodrich Aerostructures SB RA32071-160.

Table 1 – Inspection Threshold

Compliance Time (A, B or C, whichever occurs later)	
A	Within 12 months since Airbus date of manufacture of the aeroplane
B	Within 12 months after installation of new inner retainers
C	Within 9 months after 27 February 2015 [the effective date of AD 2015-0021]

- (7) If, during any DET as required by paragraph (6) of this AD, any aft engine mount inner retainer is found damaged, cracked or broken, or detected as missing, before next flight, replace the affected aft engine mount inner retainers of the affected engine installation in accordance with the instructions of Airbus SB A320-71-1060.
- (8) Within 30 days after any DET as required by paragraph (6) of this AD when findings are made, report the result to Airbus.

New Requirements of this AD:

- (9) Within 2 months after 27 January 2016 [the effective date of the original issue of this AD], identify each engine mount inner retainer in accordance with the instructions of SB A320-71-1070 and replace each part that meets any of the criteria as specified in paragraph (9.1), (9.2) or (9.3) of this AD, as applicable.

(9.1) Part is listed in Table 1 of AOT A71N011-15 Revision (Rev.) 1.



(9.2) Part installed on an aeroplane between the aeroplane date of manufacture or 01 March 2015 (whichever occurs later) and 27 January 2016 [the effective date of the original issue of this AD], and that can be identified by a Purchase Order (PO) as listed in Table 2 of AOT A71N011-15 Rev. 1.

(9.3) Part installed on an aeroplane between the aeroplane date of manufacture or 01 March 2015 (whichever occurs later) and 27 January 2016 [the effective date of the original issue of this AD], and that cannot be identified by a PO.

Use of Airbus AOT A71N011-15 Rev. 1 or UTAS SB RA32071-165 is acceptable in lieu of Airbus SB A320-71-1070 to comply with paragraph (9) of this AD.

A review of aeroplane maintenance records is acceptable to make this identification, provided those records can be relied upon for the purpose of this requirement.

(10) From 27 January 2016 [the effective date of the original issue of this AD], do not install on any aeroplane an engine mount inner retainer that meets any of the criteria as specified in paragraph (10.1), (10.2) or (10.3) of this AD, as applicable.

(10.1) Part delivered through a PO as listed in Table 2 of AOT A71N011-15 Rev. 1.

(10.2) Part delivered through an unidentified PO.

(10.3) Part listed in Table 1 of AOT A71N011-15 Rev. 1.

(11) Replacement of inner retainers on an aeroplane, as required by paragraph (7) or (9) of this AD, as applicable, does not constitute terminating action for the repetitive DET as required by paragraph (6) of this AD for that aeroplane.

Ref. Publications:

Airbus AOT A71N001-12, Revision 01 dated 09 August 2012, or Revision 02 dated 27 February 2013.

Airbus AOT A71N011-15 original issue, dated 16 September 2015, or Revision 1, dated 1 February 2016.

Airbus SB A320-71-1060 original issue, dated 09 October 2014.

Airbus SB A320-71-1070 original issue, dated 23 November 2015.

Goodrich Aerostructures SB RA32071-146, Revision 2 dated 26 July 2012.

Goodrich Aerostructures SB RA32071-160, original issue dated 18 September 2014.

Goodrich Aerostructures SB RA32071-165 dated 9 October 2015.

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 original issue of this AD was posted on 08 December 2015 as PAD 15-151 for consultation until 05 January 2016. The Comment Response Document can be found at <http://ad.easa.europa.eu>.
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 – Airworthiness Office – EIAS; Fax +33 5 61 93 44 51; E-mail: account.airworth-eas@airbus.com.

Superseded

