

## Airworthiness Directive

**AD No.:** 2020-0085

**Issued:** 06 April 2020

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 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 (EU) 2018/1139, Article 71 exemption].

**Design Approval Holder's Name:**

AIRBUS

**Type/Model designation(s):**

A318, A319, A320 and A321 aeroplanes

**Effective Date:** 04 May 2020

**TCDS Number(s):** EASA.A.064

**Foreign AD:** Not applicable

**Supersedure:** This AD supersedes EASA AD 2017-0251 dated 15 December 2017.

**ATA 71 – Powerplant – Aft Engine Mounts Retainers – 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.

**Definitions:**

For the purpose of this AD, the following definitions apply:

**Affected part:** Aft engine mount assemblies, having a Part Number (P/N) identified as “Old” in Table 1 of this AD.

**Serviceable part:** Aft engine mount assemblies, having a P/N identified as “New” in Table 1 of this AD.

**The SB:** Airbus Service Bulletin (SB) A320-71-1071 revision (rev.) 02.

**Groups:** Group 1 aeroplanes are those that have an affected part installed. Group 2 aeroplanes are those that do not have an affected part installed.

**4-lugs engine:** CFM56-5A1, CFM56-5A3, CFM56-5A4, CFM56-5A4/F, CFM56-5A5 or CFM56-5A5/F engines, fitted with a turbine rear frame (TRF) having a P/N as identified in Appendix 1 of this AD.

**Aeroplane date of manufacture:** The date of transfer of title (ownership) at the time of first delivery to an operator, which is referenced in Airbus documentation.

**Reason:**

During in-service inspections, several aft engine mount inner retainers, fitted on aeroplanes equipped with CFM56-5A/5B engines, were found broken. Investigation identified that the main cause of crack initiation was the vibration dynamic effect that affects the retainers, and that the “dull” surface finish pitting is an aggravating factor when compared with the “bright” surface finishing.

This condition, if not detected and corrected, could lead to in-flight loss of an aft engine mount link, possibly resulting in damage to the aeroplane.

To address this potential unsafe condition, Airbus issued Alert Operators Transmission (AOT) A71N001-12 (later revised) and EASA issued AD 2013-0050, later superseded by EASA AD 2015-0021, requiring repetitive detailed inspections (DET) of all aft engine mount inner retainers and, depending on findings, their replacement.

After EASA AD 2015-0021 was issued, a production quality deficiency was identified by Airbus and Goodrich Aerostructures, the engine mount retainer manufacturer, on the delivery of the inner retainer, 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 (later revised), 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.

After EASA AD 2016-0010R1 was issued, a new engine mount retainer was developed by Goodrich Aerostructures to improve the retainer efficiency. For retrofit purposes, Goodrich Aerostructures issued SB RA32071-164, and Airbus issued SB A320-71-1071, providing instructions to modify and re-identify the engine mount assemblies as instructed in Goodrich Aerostructures SB. Subsequently, it was observed that, on aeroplanes equipped with certain engines fitted with a TRF with 4 lugs configuration, the installation of the new engine mount retainers can lead to interference, and Goodrich Aerostructures revised SB RA32071-164, providing instructions not to install the new engine retainers on affected engines.

Consequently, EASA issued AD 2017-0138, retaining the requirements of EASA AD 2016-0010R1, which was superseded, and, except for aeroplanes equipped with engines fitted with a TRF with 4 lugs configuration, requiring modification and identification of aft engine mount assemblies as terminating action for the repetitive inspections of the retainers. That AD also included additional instructions applicable to installation of engines fitted with a TRF with 4 lugs configuration.



After that AD was issued, it was determined that installation of new engine mount assemblies must not be allowed for some specific engine configurations, and that installation of Goodrich Aerostructures SB RA32071-164 alone can be referred to, in order to accomplish the terminating action as required by that AD. Consequently, EASA issued AD 2017-0251, retaining the requirement of EASA AD 2017-0138, which was superseded, adding reference to Goodrich Aerostructures SB RA32071-164 as modification instruction, and introducing new requirement for aeroplanes equipped with engines fitted with a TRF with 4 lugs configuration.

Since that AD was issued, Airbus SB A320-71-1071 was revised (now at rev. 02) to include modification instructions for 4-lugs engines, by reference to Goodrich Aerostructures SB RA32071-174.

For the reason described above, this AD retains the requirements of EASA AD 2017-0251, which is superseded, and introduces new requirements for 4-lugs engines, as defined in this AD. Since the compliance time for replacement of “dull” finish aft engine mount inner retainer and for those inner retainers affected by the production quality deficiency (as related above) has expired, this AD prohibits operating aeroplanes having any of these components installed.

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

Required as indicated, unless accomplished previously:

#### Repetitive Inspections:

- (1) For Group 1 aeroplanes: Within 12 months after the last DET inspection, accomplished as required by paragraph (2) of EASA AD 2017-0251, 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 – Aft Engine Mount P/N (Affected and Serviceable Parts)

Old P/N	New P/N	
	3 lugs configuration	4 lugs configuration
238-0230-11	238M0230-11	238M0230-29
238-0230-15	238M0230-15	238M0230-31
238-0230-5	238M0230-5	238M0230-23
642-2300-3	642-2300-11	642-2300-15

#### Corrective Action(s):

- (2) If, during any DET as required by paragraph (1) 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 retainer(s) of the affected engine installation in accordance with the instructions of Airbus SB A320-71-1060.



**Modification:**

- (3) For Group 1 aeroplanes: Within 48 months after 16 August 2017 [the effective date of EASA AD 2017-0138], modify each affected part, and re-identify it as serviceable part, as applicable to TRF lug configuration, in accordance with the instructions of the SB, or Goodrich Aerostructures SB RA32071-164 or SB RA32071-174, as applicable.

**Alternative Method:**

- (4) Replacement on an aeroplane of each affected part, with a corresponding serviceable part, as applicable to the TRF lug configuration, is an acceptable method to comply with the requirements of paragraph (3) of this AD for that aeroplane.

**Credit:**

- (5) Modification of an aeroplane (except those equipped with 4-lugs engines) accomplished before the effective date of this AD in accordance with the instructions of Airbus SB A320-71-1071 at original issue or at rev. 01 is an acceptable method to comply with the requirements of paragraph (3) of this AD for that aeroplane.
- (6) An aeroplane on which Airbus modification 158435 has been embodied in production is a Group 2 aeroplane, provided that it is determined that no affected part has been installed on that aeroplane after the aeroplane date of manufacture.

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

**Terminating Action:**

- (7) Modification of an aeroplane as required by paragraph (3) of this AD, or as specified in paragraph (4) or (5) of this AD, as applicable, constitutes terminating action for the repetitive DET as required by paragraph (1) of this AD for that aeroplane.

**Parts Installation:**

- (8) For Group 1 and Group 2 aeroplanes: From the effective date of this AD, do not operate any aeroplane having installed a, and do not install on any aeroplane a “dull” finish aft engine mount inner retainer. The instructions of Airbus AOT A71N001-12, or Goodrich SB RA32071-146, can be used to verify the correct finish of the part.
- (9) For Group 1 aeroplanes: From the effective date of this AD, do not operate any aeroplane having an engine mount inner retainer installed, 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 listed in Table 1 of Airbus AOT A71N011-15 rev. 01.

(9.2) Part installed since the aeroplane date of manufacture, or since 01 March 2015 (whichever occurred later), which can be identified by a Purchase Order (PO) as listed in Table 2 of Airbus AOT A71N011-15 rev. 01.



- (9.3) Part installed since the aeroplane date of manufacture, or since 01 March 2015 (whichever occurred later) and before 27 January 2016 [the effective date of the original issue of EASA AD 2016-0010], which cannot be identified by a PO.
- (10) From 27 January 2016 [the effective date of the original issue of EASA AD 2016-0010], 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. 01.
- (10.2) Part delivered through an unidentified PO.
- (10.3) Part listed in Table 1 of AOT A71N011-15 rev. 01.
- (11) Do not install an affected part on any aeroplane, as required by paragraph (11.1) or (11.2) of this AD, as applicable
- (11.1) For Group 1 aeroplanes: After modification of the aeroplane as required by paragraph (3) of this AD, or as specified in paragraph (4) or (5) of this AD, as applicable.
- (11.2) For Group 2 aeroplanes: From 16 August 2017 [the effective date of EASA AD 2017-0138].
- (12) For an aeroplane equipped with 4-lugs engine (left hand (LH) and/or right hand (RH) side), and on which, before the 15 December 2017 (the effective date of EASA AD 2017-0251), an aft engine mount assembly, having a P/N identified as "New P/N" and "3 lugs configuration" in Table 1 of this AD, has been installed on the affected engine pylon (LH and/or RH side), or on which an affected part has been modified and re-identified with the corresponding P/N identified as "New" and "3 lugs configuration" in Table 1 of this AD, in accordance with the instructions of Airbus SB A320-71-1071, or Goodrich Aerostructures SB RA32071-164, before next flight after 15 December 2017, contact Airbus for approved instructions and accomplish those instructions accordingly.

#### Ref. Publications:

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

Airbus AOT A71N011-15 original issue dated 16 September 2015, or rev. 01 dated 01 February 2016.

Airbus SB A320-71-1060 original issue dated 09 October 2014, or rev. 01 dated 07 April 2015, or rev. 02 dated 18 December 2015.

Airbus SB A320-71-1071 original issue dated 08 November 2016, or rev. 01 dated 17 October 2017, or rev. 02 dated 22 October 2019.

Goodrich Aerostructures SB RA32071-146 rev. 02 dated 26 July 2012.



Goodrich Aerostructures SB RA32071-160 original issue dated 18 September 2014 or rev.01 dated 23 September 2016.

Goodrich Aerostructures SB RA32071-164 original issue dated 06 October 2016, or rev. 01 dated 19 July 2017, or rev. 02 dated 04 April 2018, or rev. 03 dated 14 September 2018.

Goodrich Aerostructures SB RA32071-174 original issue dated 17 September 2019.

The use of later approved revisions of the above-mentioned 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. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
3. Enquiries regarding this AD should be referred to the EASA Programming and Continued Airworthiness Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
4. 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 [EU aviation safety reporting system](#).
5. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS – Airworthiness Office – IIAS; Fax +33 5 61 93 44 51; E-mail: [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com).



## Appendix 1 – TRF with 4 lugs configuration

P/N
336-031-615-0
336-031-617-0
336-031-618-0
336-031-621-0
336-031-650-0
336-031-651-0
336-031-652-0
336-031-653-0
336-031-660-0
336-031-661-0
336-031-662-0
336-031-663-0
336-031-670-0
336-031-671-0
336-031-672-0
336-031-673-0
336-031-640-0
336-031-642-0

