



## Airworthiness Directive

**AD No.:** 2021-0226

**Issued:** 08 October 2021

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):

A380 aeroplanes

**Effective Date:** 22 October 2021

**TCDS Number(s):** EASA.A.110

**Foreign AD:** Not applicable

**Supersedure:** This AD supersedes EASA AD 2019-0220R1 dated 17 December 2019.

## ATA 53 – Fuselage – Rear Cone Frame Feet 102/103 – Modification

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### Manufacturer(s):

Airbus

### Applicability:

Airbus A380-841, A380-842 and A380-861 aeroplanes, all manufacturer serial numbers, except aeroplanes that have embodied Airbus modification (mod) 77140 in production.

### Definitions:

For the purpose of this AD, the following definition applies:

**The SB:** Airbus Service Bulletin (SB) A380-53-8214.

### Reason:

During structural analysis conducted on the section 19 skin-to-frame (FR) attachment of an A380 aeroplane, it was demonstrated that the current thickness of the foot of FR102, between stringer (STGR) 19 and STGR 20, both left-hand (LH) and right-hand (RH) sides of the fuselage, is unable to withstand ultimate load under the most severe thermo-mechanical load case. From fatigue and damage tolerance analysis, the study revealed that the current thickness of the feet of FR102 and FR103 at the same location between STGR 19 and STGR 20 LH/RH, are unable to reach the design service goal of the aeroplane.



This condition, if not corrected, would affect the structural integrity of the aeroplane.

To address this unsafe condition, Airbus issued SB A380-53-8183 (corresponding to mod 77936) to provide instructions to reinforce the fuselage rear cone skin-to-frame attachment feet at FR102 and FR103 between STGR 19 and STGR 20, both LH and RH sides of the fuselage, by installing machined washers. Consequently, EASA issued AD 2019-0220 (later revised) to require a modification of the fuselage rear cone. Subsequently, Airbus developed and introduced mod 77140, which provides equivalent safety to mod 77936, on the production line. That AD was revised accordingly, excluding these aeroplanes from the Applicability.

Since EASA AD 2019-0220R1 was issued, during implementation of the modification on some aeroplanes, cracks were detected at hole and corner radii locations. Prompted by these findings, a new analysis and laboratory tests have been performed and, based on the results, a new solution has been designed, as defined in Airbus SB A380-53-8214.

For the reason described above, this AD cancels the requirements of EASA AD 2019-0220R1, which is superseded, and requires an improved modification of the fuselage rear cone.

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

Required as indicated, unless accomplished previously:

#### Modification:

Within the compliance time(s) specified in Table 1 of this AD, modify the fuselage rear cone in accordance with the instructions of the SB.

Table 1 – Modification

Compliance Time (whichever occurs later, A or B)	
<b>A</b>	Before exceeding 6 750 flight cycles (FC) or 49 700 flight hours (FH), whichever occurs first since aeroplane first flight
<b>B</b>	Within 2 100 FC or 15 400 FH, whichever occurs first after the effective date of this AD

#### Ref. Publications:

Airbus SB A380-53-8214 original issue dated 10 August 2021.

The use of later approved revisions of the above-mentioned document 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 07 September 2021 as PAD 21-134 for consultation until 05 October 2021. The Comment Response Document can be found in the [EASA Safety Publications Tool](#), in the compressed (zipped) file attached to the record for this AD.



3. Enquiries regarding this AD should be referred to the EASA Safety 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](#). This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.
5. For any question concerning the technical content of the requirements in this AD, please contact: Airbus – EIANA (Airworthiness Office), Telephone: +33 562 110 253, Fax: +33 562 110 307, E-mail: [account.airworth-A380@airbus.com](mailto:account.airworth-A380@airbus.com).

