

Airworthiness Directive

AD No.: 2017-0158R1
Issued: 01 December 2022

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, or Annex Vb Part ML.A.301, as applicable, 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 Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

AIRBUS S.A.S.

Type/Model designation(s):

A300-600 and A300-600ST aeroplanes

Effective Date: Revision 1: 15 December 2022
 Original issue: 08 September 2017

TCDS Number(s): EASA.A.172 and EASA.A.014

Foreign AD: Not applicable

Revision: This AD revises EASA AD 2017-0158 dated 25 August 2017, which superseded EASA AD 2016-0179 dated 12 September 2016.

ATA 57 – Wings – Fuselage Frame 40 Lower Outboard Radius – Inspection

Manufacturer(s):

Airbus (formerly Airbus Industrie)

Applicability:

Airbus A300 B4-605R, A300 B4-622R, A300 C4-605R Variant F, A300 F4-605R and A300 F4-622R aeroplanes, all manufacturer serial numbers (MSN) on which Airbus modification (mod) 10221 has been embodied in production, and

A300 F4-608ST aeroplanes, all MSN on which Airbus mod 19020 has been embodied in production.

Definitions:

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

The SB: Airbus Service Bulletin (SB) A300-57-6120 or Airbus SB A300-57-9035, as applicable.

Groups: Group 1 aeroplanes are those which have been inspected in accordance with the instructions of Alert Operators Transmission (AOT) A57W009-16 Revision 01 before 08 September 2017 [the effective date of the original issue of this AD]. Group 2 aeroplanes are those which have

not been inspected in accordance with the instructions of AOT A57W009-16 Revision 01 before 08 September 2017 [the effective date of the original issue of this AD].

SDI methods: Special detailed inspection (SDI) method A is a high frequency eddy current (HFEC) inspection of the radius / fastener area. SDI method B is an HFEC inspection of the radius / fastener area plus a rototest of the fastener holes. SDI method C is an HFEC inspection of the radius / fastener area plus an ultrasonic inspection of the fastener holes (for A300-600 aeroplanes only).

Reason:

Following a full stress analysis of the Frame (FR) 40 lower outboard area of the center wing, supported by a Finite Element Model (FEM), of the post-mod 10221 configuration, it was demonstrated that, for the FR40 forward fitting lower radius, a crack could occur after a certain number of flight cycles (FC).

This condition, if not detected and corrected, could reduce the structural integrity of the fuselage.

To address this potential unsafe condition, Airbus determined that crack detection could be achieved through an SDI using an HFEC inspection method, and issued AOT A57W009-16 to provide inspection instructions.

Consequently, EASA issued AD 2016-0085 to require a one-time SDI of the FR40 lower area and, depending on findings, accomplishment of applicable corrective action(s). After that AD was issued, further cracks were detected, originating from the fastener hole, and, based on these findings, it was determined that the inspection area had to be enlarged, and Airbus issued AOT A57W009-16 Revision 01 accordingly. Consequently, EASA issued AD 2016-0179, retaining the requirements of EASA AD 2016-0085, which was superseded, to extend the area of inspection, and to require an additional inspection for aeroplanes that had been previously inspected.

The one-time SDI for high cycle A300-600 aeroplanes was intended to mitigate the highest risks within the fleet, pending development of instructions for repetitive inspections.

After EASA AD 2016-0179 was issued, Airbus published SB A300-57-6120 and SB A300-57-9035 that provided the inspection programme for respectively A300-600 and A300-600ST aeroplanes in post-mod 10221 and 19020 respectively, configuration. The AOT one-time inspection was superseded by these repetitive inspection SBs. These SBs included possible inspection methods and repair instructions in case of findings, together with the associated inspection programme.

Consequently, EASA AD 2017-0158 was published, retaining the requirements of EASA AD 2016-0179, which was superseded, extending the applicability to A300-600ST aeroplanes, and defining new inspection methods with new compliance times, including repetitive inspections, depending on aeroplane inspection status.

Since that AD was issued, following further investigation, Airbus published Revision 1 of SB A300-57-6120 to introduce an additional alternative SDI method (including an ultrasonic inspection of the fastener hole area), which provides more flexibility to A300-600 operators.



For the reason described above, this AD is revised to add this alternative SDI method (method C, as defined in this AD, applicable to A300-600 aeroplanes only), and to amend and add (for clarification) some definitions for the purpose of this AD.

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

Required as indicated, unless accomplished previously:

Note 1: For the purpose of this AD, the average flight time (AFT) as referred to in the tables below must be established by dividing the total number of flight hours (FH) by the number of FC counted, as applicable, since:

- [1] first flight of the aeroplane, for selecting the inspection threshold (TH) for a non-repaired area,
- [2] repair embodiment, for selecting the inspection TH for a repaired area,
- [3] last inspection, for selecting the inspection interval.

Inspection(s):

- (1) Within the compliance time specified in Table 1 of this AD for Group 1 aeroplanes, and in Table 2 of this AD for Group 2 aeroplanes, and, thereafter, at intervals not to exceed the values specified in Table 3 of this AD, accomplish an SDI of the non-repaired radius / fastener areas and fastener holes in accordance with the instructions of the SB, as applicable.

Table 1 – Group 1 Inspection Thresholds (Non-repaired Areas)

AFT	Compliance Time (whichever occurs later, A or B)
> 1,5	<p>A: Before exceeding 14 700 FC or 31 900 FH since first flight of the aeroplane, whichever occurs first.</p> <p>B: Within 1 900 FC or 4 300 FH, whichever occurs first after the one-time inspection accomplished per AOT A57W009-16 Revision 01.</p>
≤1,5	<p>A: Before exceeding 15 900 FC or 23 900 FH since first flight of the aeroplane, whichever occurs first.</p> <p>B: Within 2 100 FC or 3 200 FH, whichever occurs first after the one-time inspection accomplished per AOT A57W009-16 Revision 01.</p>



Table 2 – Group 2 Inspection Thresholds (Non-repaired Areas)

AFT	Compliance Time (whichever occurs later, A or B)
> 1,5	<p>A: Before exceeding 14 700 FC or 31 900 FH since first flight of the aeroplane, whichever occurs first.</p> <p>B: Within 12 months after 08 September 2017 [the effective date of the original issue of this AD], without exceeding (whichever occurs later):</p> <ul style="list-style-type: none"> - 19 000 FC or 41 000 FH, whichever occurs first since first flight of the aeroplane; - 300 FC or 630 FH, whichever occurs first after 12 May 2016 [the effective date of EASA AD 2016-0085]
≤1,5	<p>A: Before exceeding 15 900 FC or 23 900 FH since first flight of the aeroplane, whichever occurs first.</p> <p>B: Within 12 months after 08 September 2017 [the effective date of the original issue of this AD], without exceeding (whichever occurs later):</p> <ul style="list-style-type: none"> - 19 000 FC or 41 000 FH, whichever occurs first since first flight of the aeroplane; - 300 FC or 630 FH, whichever occurs first after 12 May 2016 [the effective date of EASA AD 2016-0085]

Table 3 – Repetitive Inspection Intervals (Non-repaired Areas)

Inspection Method	Inspection Interval (FC or FH not to exceed, whichever occurs first)	
	AFT > 1,5	AFT ≤ 1,5
A	1 900 FC or 4 300 FH	2 100 FC or 3 200 FH
B	6 600 FC or 14 300 FH	7 100 FC or 10 700 FH
C	4 200 FC or 9 100 FH	4 500 FC or 6 800 FH

- (2) For aeroplanes with a repaired FR-40 lower outboard area: Within the compliance time values as specified in Table 4 of this AD, and, thereafter, at intervals not exceeding those same values, accomplish an SDI of the repaired radius / fastener areas and fastener holes in accordance with the instructions of the SB, as applicable.

Table 4 – Inspection Thresholds and Intervals (Repaired Areas)

Repair (No.)	Compliance Time (FC or FH not to exceed, whichever occurs first since repair embodiment, or since the last inspection, as applicable)	
	AFT > 1,5	AFT ≤1,5
Stop Drilling (R53810799)	1 500 FC or 3 400 FH	1 700 FC or 2 500 FH
Cut-Out (R53810798)	4 500 FC or 9 800 FH	4 900 FC or 7 300 FH



Corrective Action(s):

- (3) If, during any inspection as required by paragraph (1) or (2) of this AD, as applicable, any crack is found, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of the SB, as applicable, or contact Airbus for approved repair instructions and accomplish those instructions accordingly.

Reporting

- (4) Within 30 days after each inspection as required by paragraph (1) or (2) of this AD, as applicable, report the results (including no findings) to Airbus.

Terminating Action:

- (5) None.

Ref. Publications:

Airbus AOT A57W009-16 original issue dated 25 February 2016, or Revision 01 dated 13 July 2016.

Airbus SB A300-57-6120 original issue dated 28 April 2017, or Revision 01 dated 13 October 2022.

Airbus SB A300-57-9035 original issue dated 28 April 2017.

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 Safety Information Section, Certification Directorate. E-mail: 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 – 1IALW (Airworthiness Office),
E-mail: continued.airworthiness-wb.external@airbus.com.

