Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 17-101

Issued: 26 July 2017

Note: This Proposed Airworthiness Directive (PAD) 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.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.
All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated..

Design Approval Holder's Name:
AIRBUS

Type/Model designation(s):
A300-600 and A300-600ST aeroplanes

Effective Date: [TBD - standard: 14 days after AD issue date]

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

Foreign AD: Not applicable

Supersedure: This AD supersedes 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 was embodied in production, and

A300 F4-608ST aeroplanes, all MSN on which Airbus mod 10221 (embodied by mod 19020 for A300-600ST) was embodied in production.

Reason:
Following a full stress analysis of the Frame (FR) 40 lower area, 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 established that crack detection could be achieved through a special detailed inspection (SDI) using a high frequency eddy current (HFEC) method, and issued Alert Operators Transmission (AOT) A57W009-16 to provide those 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 must be enlarged, and Airbus issued AOT A57W009-16 Revision (Rev.) 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 were 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.

Since EASA AD 2016-0179 was issued, Airbus published SB A300-57-6120 and SB A300-57-9035 that provide the inspection programme for A300-600 and A300-600ST aeroplanes post-mod 10221 (embodied by mod 19020 for A300-600ST). The AOT one-time inspection is superseded by these repetitive inspection SB. These SB include alternative inspection methods and repairs solutions in case of findings together with the associated inspection programme.

For the reasons described above, this AD retains the requirements of EASA AD 2016-0179, which is superseded, extends its applicability to A300-600ST aeroplanes, defines new inspections methods with new compliance times, including repetitive inspections, depending on the aeroplane inspection status.

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) can be established by dividing the FH by the FC counted:

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

Note 2: Airbus SB A300-57-6120 or Airbus SB A300-57-9035, as applicable, are hereafter collectively referred to as “the applicable SB” in this AD.

Note 3: For the purpose of this AD, Group 1 aeroplanes are those already inspected in accordance with the instructions of AOT A57W009-16 Revision 01 before the effective date of this AD. Group 2 aeroplanes are those not inspected in accordance with the instructions of AOT A57W009-16 Revision 01 at the effective date of this AD.

Note 4: For the purpose of this AD, inspection method A is an HFEC inspection of the radius/fastener area. Inspection method B is an HFEC inspection of the radius/fastener area and a rototest of the fastener hole. Both are defined as SDI in this AD.

Inspection(s):

(1) Within the compliance time specified in Table 1 (Group 1 aeroplanes) or Table 2 (Group 2 aeroplanes) of this AD, as applicable, and, thereafter, at intervals not exceeding 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 applicable SB.

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

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

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

AFT	**Compliance Time** (whichever occurs later, A or B)
> 1,5	**A**: Before exceeding 14 700 FC or 31 900 FH since first flight of the aeroplane, whichever occurs first **B**: Within 12 months after the effective date of this AD, without exceeding (whichever occurs later): - 19 000 FC or 41 000 FH, whichever occurs first since aeroplane first flight - 300 FC or 630 FH, whichever occurs first after 12 May 2016 [the effective date of EASA AD 2016-0085]
≤1,5	**A**: Before exceeding 15 900 FC or 23 900 FH since first flight of the aeroplane, whichever occurs first **B**: Within 12 months after the effective date of this AD, without exceeding (whichever occurs later): - 19 000 FC or 41 000 FH, whichever occurs first since aeroplane first flight - 300 FC or 630 FH, whichever occurs first after 12 May 2016 [the effective date of EASA AD 2016-0085]

Table 3 – Repetitive Inspections – Non-repaired Areas

Inspection Method	**Compliance Time** (not to exceed, whichever occurs first, FC or FH)	
	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

(2) 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 applicable SB.

Table 4 – Inspection Thresholds and Intervals – Repaired Areas

Repair (No.)	**Compliance Time** (FC or FH, whichever occurs first after repair embodiment, or since 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 applicable SB, 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

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

The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.

Remarks:

1. This Proposed AD will be closed for consultation on 23 August 2017.

2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.

3. For any question concerning the technical content of the requirements in this PAD, please contact: AIRBUS – EIAW (Airworthiness Office),
E-mail: continued.airworthiness-wb.external@airbus.com .