



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 17-104

Issued: 28 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):

A319, A320 and A321 aeroplanes

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

TCDS Number(s): EASA.A.064

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2016-0187 dated 19 September 2016

ATA 52 – Door – Forward and Aft Cargo Door Frame Forks – Inspection / Repair

Manufacturer(s):

Airbus (formerly Airbus Industrie)

Applicability:

Airbus A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-211, A320-212, A320-214, A320-215, A320-216, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231 and A321-232 aeroplanes, manufacturer serial numbers (MSN) up to 0758 inclusive.

Reason:

During full scale fatigue test, cracks were found on frame forks and outer skin on forward and aft cargo doors. To improve the fatigue behaviour of the frame forks, Airbus introduced modification (mod) 22948 in production, and issued inspection Service Bulletin (SB) A320-52-1032 and mod SB A320-52-1042, both recommended. Since those actions were taken, further improved cargo compartment doors were introduced in production through Airbus mod 26213, on aeroplanes having MSN 0759 and up. This modification, which is not available for in-service retrofit, also includes provisions that exclude installation of a pre-mod 26213 aft or forward compartment cargo door on a post-mod aeroplane.



In the frame of the Widespread Fatigue Damage (WFD) study, it was determined that repetitive inspections are necessary for aft and forward cargo compartment doors on aeroplanes that are in pre-mod 26213 configuration. Failure to detect cracks would reduce the cargo door structural integrity.

This condition, if not detected and corrected, could lead to cargo door failure, possibly resulting in decompression of the aeroplane and injury to occupants.

To address this unsafe condition, Airbus issued SB A320-52-1171 to provide instructions for repetitive special detailed inspections (SDI). This SB was later revised to correct the list of affected cargo doors. Airbus also issued SB A320-52-1170, introducing a door modification which would allow terminating the repetitive SDI.

Consequently, EASA issued AD 2016-0187 to require repetitive SDI of the affected cargo doors and, depending on findings, the accomplishment of applicable repairs. That AD also included reference to SB A320-52-1170 as optional terminating action.

Since that AD was issued, further investigations linked to the WFD analysis highlighted that, to meet the WFD requirements, it is necessary to require embodiment of the terminating action modification.

For the reason described above, this AD retains the requirements of EASA AD 2016-0187, which is superseded, and requires modification of all affected cargo doors, which constitutes terminating action for the repetitive SDI required by this AD.

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

Required as indicated, unless accomplished previously:

Note 1: For the purpose of this AD, an “affected door” is a forward or aft cargo compartment door, having a part number (P/N) as listed in Appendix 1 of this AD, except those on which Airbus SB A320-52-1042 or Airbus SB A320-52-1170 has been embodied.

Inspections:

- (1) Within the compliance time defined in Table 1 of this AD, as applicable, and, thereafter, at intervals not to exceed 3 000 flight cycles (FC), accomplish an SDI of all frame forks in beam 4 area of each affected door (see Note 1 of this AD) in accordance with the instructions of Airbus SB 320-52-1171 Revision 02.

A review of the aeroplane delivery or maintenance records is acceptable to identify whether an affected door is installed, provided that the cargo compartment door P/N can be conclusively determined from that review.



Table 1 – Inspection Threshold

| Compliance Time (whichever occurs later, A , B , C , or D) – See Note 2 of this AD | |
|--|--|
| A | Before exceeding 37 500 FC since first installation of the door on an aeroplane |
| B | Within 900 FC after 03 October 2016 [the effective date of EASA AD 2016-0187], without exceeding 41 950 FC since first installation of the door on an aeroplane |
| C | Within 50 FC after 03 October 2016 [the effective date of EASA AD 2016-0187], for a door having reached or exceeded 41 900 FC since first installation on an aeroplane |
| D | Within 3 000 FC since last inspection in accordance with the instructions of Airbus SB A320-52-1032 |

Note 2: If no data, or only partial data, is available, operators may refer to the guidance specified in ALS Part 1 Section 1 chapter 5.2 (traceability) to determine the FC accumulated by a forward or aft cargo compartment door.

Corrective Actions:

- (2) If, during any SDI as required by paragraph (1) of this AD, any crack is detected on a door, accomplish the applicable corrective action(s) within the compliance time specified in, and in accordance with the instructions of, Airbus SB A320-52-1171 Revision 02.

Modification:

- (3) Before exceeding 56 300 FC and not before accumulating 21 700 FC since first installation of an affected door on an aeroplane (see Notes 1 and 2 of this AD), modify the door in accordance with the instructions of Airbus SB A320-52-1170.

Credit:

- (4) Inspections and corrective actions, accomplished before 03 October 2016 [the effective date of EASA AD 2016-0187] in accordance with the instructions of Airbus SB A320-52-1171 original issue, are acceptable to comply with the initial requirements of paragraphs (1) and (2) of this AD, provided reference to the affected door P/N, as listed in Appendix 1 of this AD and in Revision 01 of Airbus SB A320-52-1171, has been made.
- (5) Inspections and corrective actions, accomplished before the effective date of this AD in accordance with the instructions of Airbus SB A320-52-1171 Revision 01, are acceptable to comply with the initial requirements of paragraphs (1) and (2) of this AD.

Terminating Action:

- (6) Accomplishment of corrective action(s) on an aeroplane, as required by paragraph (2) of this AD, does not constitute terminating action for the repetitive inspections required by paragraph (1) of this AD for that aeroplane.
- (7) Modification of all affected doors (see Note 1 of this AD) on an aeroplane as required by paragraph (3) of this AD, or in accordance with the instructions of Airbus SB A320-52-1042, constitutes terminating action for the repetitive SDI as required by paragraph (1) of this AD for that aeroplane, provided that, following modification, no affected doors are re-installed on that aeroplane.



- (8) Modification of an affected door on an aeroplane, in case of finding damaged frame forks, in accordance with the instructions of Airbus SB A320-52-1042 or SB A320-52-1170, **and** Airbus Repair Design Approval Sheet (RDAS), constitutes terminating action for the repetitive SDI required by paragraph (1) of this AD for that door on that aeroplane, provided that, following modification, no affected door is re-installed in that door position on that aeroplane.

Part Installation:

- (9) From 03 October 2016 [the effective date of EASA AD 2016-0187], it is allowed to install an affected door (see Note 1 of this AD) on an aeroplane, provided that door has accumulated less than 56 300 FC since first installation on an aeroplane (see Note 2 of this AD) and that, following installation, the affected door is inspected as required by paragraph (1) of this AD.

Ref. Publications:

Airbus SB A320-52-1032 original issue dated 16 August 1993, or Revision 01 dated 21 March 1994, or Revision 02 dated 10 February 1999.

Airbus SB A320-52-1042 original issue dated 16 August 1993, or Revision 01 dated 22 November 1993, or Revision 02 dated 14 January 1997.

Airbus SB A320-52-1170 original issue dated 05 September 2016.

Airbus SB A320-52-1171 original issue dated 29 October 2015, or Revision 01 dated 05 September 2016, or Revision 02 dated 10 April 2017.

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

Remarks:

1. This Proposed AD will be closed for consultation on 25 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 – Airworthiness Office – EIAS; Fax +33 5 61 93 44 51; E-mail: account.airworth-eas@airbus.com.



Appendix 1
Affected Cargo Doors P/N

| Forward Cargo Doors P/N | Aft Cargo Doors P/N |
|----------------------------|---------------------|
| D52371000000 | D52371900000 |
| D52371000002 | D52371900002 |
| D52371000004 | D52371900004 |
| D52371000006 | D52371900008 |
| D52371000008 | D52371900010 |
| D52371000010 | D52371900012 |
| D52371000012 | D52371900014 |
| D52371000014 | D52371900016 |
| D52371000016 | D52371900018 |
| D52371000018 | D52371900022 |
| D52371000022 | |

