additional analysis and tests may be required to demonstrate that the injury criteria are met for the area that an occupant could contact. For example, if different yaw angles could result in different airbag device performance, then additional analysis or separate tests may be necessary to evaluate performance.

3. Neck Injury Criteria
   a. The seating system must protect the occupant from experiencing serious neck injury. The assessment of neck injury must be conducted with the airbag device activated, unless there is reason to also consider that the neck-injury potential would be higher for impacts below the airbag-device deployment threshold.
   b. The $N_{ij}$, calculated in accordance with 49 CFR 571.208, must be below 1.0, where $N_{ij} = F/F_{ac} + M_{ij}/M_{ac}$, and $N_{ij}$ critical values are:
      i. $F_{ac} = 1350$ lb for tension
      ii. $F_{ac} = 1385$ lb for compression
      iii. $M_{ac} = 229$ lb-ft in flexion
      iv. $M_{ac} = 100$ lb-ft in extension
   c. In addition, peak upper neck $F_y$ must be below 937 lb in tension and 899 lb in compression.
   d. Rotation of the head about its vertical axis relative to the torso is limited to 105 degrees in either direction from forward-facing.
   e. The neck must not impact any surface that would produce concentrated loading on the neck.

4. Spine and Torso Injury Criteria
   a. The lumbar spine tension ($F_z$) cannot exceed 1200 lb.
   b. Significant concentrated loading on the occupant’s spine, in the area between the pelvis and shoulders during impact, including rebound, is not acceptable. During this type of contact, the interval for any rearward (X-axis direction) acceleration exceeding 20g must be less than 3 milliseconds as measured by the thoracic instrumentation specified in 49 CFR part 572, subpart E, filtered in accordance with SAE recommended practice J211/1, “Instrumentation for Impact Test—Part 1—Electronic Instrumentation.”
   c. The occupant must not interact with the armrest or other seat components in any manner significantly different than would be expected for a forward-facing seat installation.

5. Pelvis Criteria
   Any part of the load-bearing portion of the bottom of the ATD pelvis must not translate beyond the edges of the seat bottom seat-cushion supporting structure.

6. Femur Criteria
   Axial rotation of the upper leg (about the Z-axis of the femur, per SAE J211/1) must be limited to 35 degrees in the strike direction from the normal seating position. Evaluation during rebound need not be considered.

7. ATD and Test Conditions
   Longitudinal tests conducted to measure the injury criteria above must be performed with the FAA Hybrid III ATD, as described in SAE 1999–01–1609, “A Lumbar Spine Modification to the Hybrid III ATD For Aircraft Seat Tests.” The tests must be conducted with an undeformed floor, at the most-critical yaw cases for injury, and with all lateral structural supports (e.g. armrests or walls) installed.

Inflatable Lapbelt Special Conditions
   The inflatable lapbelts must meet special conditions no. 25–187A–SC, “Boeing Model 777 Series Airplanes; Seats with Inflatable Lapbelts.”
   1. Because this type of protection system may or may not activate during various crash conditions, the applicant must demonstrate that the injury criteria listed in these special conditions are not exceeded in an event which is slightly below the activation level of the airbag system.
   2. Additionally, as indicated in special conditions no. 25–187A–SC, inflatable lapbelts must be shown to not affect emergency-egress capabilities in the main aisle, cross-aisle, and passageway.

Issued in Renton, Washington, on June 17, 2016.

Michael Kaszycki,
Assistant Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016–15784 Filed 7–1–16; 8:45 am]
BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

RIN 2120–AA64

Airworthiness Directives; Airbus Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Airbus Model A300 series airplanes; and Model A300 B4–600, B4–600R, and F4–600R series airplanes, and Model A300 C4–605R Variant F airplanes (collectively called Model A300–600 series airplanes). This AD was prompted by a report of cracking of the lower tension bolt area at the rib one junction (both sides) of the lower wing. This AD requires repetitive inspections for cracking of the fasteners and of the fitting around the fastener holes at the frame (FR) 40 lower wing location, and corrective actions if necessary. We are issuing this AD to detect and correct crack initiation of the fittings of the FR40 lower wing locations, which could result in reduced structural integrity of the airplane.

DATES: This AD becomes effective August 9, 2016.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of August 9, 2016.

ADDRESSES: For Airbus service information identified in this final rule, contact Airbus SAS, Airworthiness Office—EAW, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email account.airworthiness@airbus.com; Internet http://www.airbus.com. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–221. It is also available on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA–2015–8134.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA–2015–8134; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800–647–5527) is in the ADDRESSES section.


SUPPLEMENTARY INFORMATION:
Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus Model A300 series airplanes; and Model A300 B4–600, B4–600R, and F4–600R series airplanes, and Model A300 C4–605R Variant F airplanes (collectively called Model A300–600 series airplanes). The NPRM published in the Federal Register on December 31, 2015 (80 FR 81786) (“the NPRM”).

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2014–0272, dated December 12, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus Model A300 series airplanes; and Model A300 B4–600, B4–600R, and F4–600R series airplanes, and Model A300 C4–605R Variant F airplanes (collectively called Model A300–600 series airplanes). The MCAI states:

Following the A300–600 Extended Service Goal (ESG2) exercise, specific inspections for cracks were performed in fittings of frame (FR) 40, in areas not covered by any existing task.

Findings were identified on an A300–600 aeroplane withdrawn from service in the lower tension bolt area at rib one junction (both sides).

This condition, if not detected and corrected, could lead to crack initiation, affecting the structural integrity of the aeroplane.

To address this potential unsafe condition, an inspection programme was developed for the fitting around the fastener holes located at FR40 lower wing junction, left-hand (LH) and right-hand (RH) sides.

For the reasons described above, this [EASA] AD requires repetitive High Frequency Eddy Current (HFEC) inspections and rototest inspections of the fitting around the fastener holes located at FR40 lower wing junction and, depending on findings, accomplishment of a repair.

The corrective actions include a repair using a method approved by the Manager, International Branch, ANM–116, Transport Airplane Directorate, FAA; or the EASA; or Airbus’s EASA Design Organization Approval (DOA).


Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA’s response to each comment.

Request To Clarify Corrective Actions

FedEx asked that the corrective actions identified in paragraph (i) of the proposed AD be clarified. FedEx stated that paragraph (h)(1) of the proposed AD specifies “If one or more of the hole diameters is outside the tolerance of the nominal diameter, and outside the tolerance of the first and second oversize: Do the applicable corrective actions required by paragraph (i) of this AD.” FedEx added that paragraph (i) of the proposed AD specifies “If, during any inspection required by this AD, any crack is found, or one or more of the hole diameters are outside the tolerance of the nominal diameter: Repair before further flight using a method approved by the Manager, International Branch, ANM–116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or Airbus’s EASA Design Organization Approval (DOA).” FedEx noted that paragraph (i) should specify “one or more of the hole diameters are outside the tolerance of the nominal diameter and outside the tolerance of the first and second oversize” to match the language in paragraph (h)(1) of the proposed.

We agree. We have confirmed that the language in paragraph (i) of this AD should match the language in paragraph (h)(1) of this AD. We have changed paragraph (i) of this AD accordingly.

Request To Revise Compliance Time

United Parcel Service (UPS) asked that we revise the compliance time for the rototest inspections specified by paragraph (h) of the proposed AD to a threshold based on total service time, rather than calendar time alone. UPS stated that, based on reported findings to date, the crack growth rate is so slow it will not affect the immediate airworthiness of the airplane. UPS suggested that we add a threshold of 11,900 total flight cycles.

We do not agree with the commenter’s request. The HFEC inspection required by paragraph (g) of this AD is a necessary interim measure intended to find cracking before the required compliance time for the rototest inspection in paragraph (h) of this AD. As the commenter acknowledged, a 7.5-mm crack may be detected during an HFEC inspection within 1,000 flight hours. That same 7.5-mm crack, undetected for 3 years until the rototest inspection is done, could grow and result in reduced structural integrity of the airplane; therefore, the repetitive HFEC inspections must be retained in this AD. If no cracking is found, the HFEC inspection can be repeated, or terminated when the rototest inspection is accomplished. However, affected operators may request approval of an AMOC to do the rototest inspections only, under the provisions of paragraph (j) of this AD by submitting data and analysis, and a compliance schedule, substantiating that the change would provide an acceptable level of safety. We have not changed this AD regarding this issue.

Request To Remove High Frequency Eddy Current (HFEC) Inspections

UPS asked that the HFEC inspections specified by paragraph (g) of the proposed AD be removed. UPS stated that the HFEC inspection requirement does not enhance airplane safety because only substantial damage can be detected by this method, due to a restricted inspection area. UPS also stated that the smallest crack detectable by an HFEC inspection method is calculated to be 7.5 mm in length, not taking into account the inspection surface radius and the limited access to the inspection area. UPS added that fastener location and potential obstacles affect consistent probe movement, which increases the chance for inconsistent inspection readings.

We do not agree with the commenter’s request. The HFEC inspection required by paragraph (g) of this AD is a necessary interim measure intended to find cracking before the required compliance time for the rototest inspection in paragraph (h) of this AD. As the commenter acknowledged, a 7.5-mm crack may be detected during an HFEC inspection within 1,000 flight hours. That same 7.5-mm crack, undetected for 3 years until the rototest inspection is done, could grow and result in reduced structural integrity of the airplane; therefore, the repetitive HFEC inspections must be retained in this AD. If no cracking is found, the HFEC inspection can be repeated, or terminated when the rototest inspection is accomplished. However, affected operators may request approval of an AMOC to do the rototest inspections only, under the provisions of paragraph (j) of this AD by submitting data and analysis, and a compliance schedule, substantiating that the change would provide an acceptable level of safety. We have not changed this AD regarding this issue.
The average labor rate is $85 per work-hour.

Costs of Compliance

We estimate that this AD affects 166 airplanes of U.S. registry. We also estimate that it takes about 12 work-hours per product to comply with the basic requirements of this AD. The average labor rate is $85 per work-hour.

Based on these figures, we estimate the cost of this AD on U.S. operators to be $169,320, or $1,020 per product.

We have received no definitive data that would enable us to provide a cost estimate for the on-condition actions specified in this AD.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. “Subtitle VII: Aviation Programs,” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

§ 39.13 [Amended]

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):


(a) Effective Date

This AD becomes effective August 9, 2016.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Airbus airplanes identified in paragraphs (c)(1) and (c)(2) of this AD, certificated in any category.


(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Reason

This AD was prompted by a report of cracking of the lower tension bolt area at rib one junction (both sides) of the lower wing. We are issuing this AD to detect and correct crack initiation of the fittings of the frame (FR) 40 lower wing locations, which could result in reduced structural integrity of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Repetitive High Frequency Eddy Current (HFEC) Inspections

Within 1,000 flight hours after the effective date of this AD: Do an HFEC inspection for cracking of fasteners 1 through 3 at the left-hand and right-hand sides of the FR40 lower junction, and of the fitting around the fastener holes, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A300–57–0257, excluding Appendix 01 and including Appendix 02, dated April 4, 2014 (for Model A300 B2–1A, B2–1C, B2K–3C, B2–203, B4–2C, B4–103, and B4–203 airplanes); or Airbus Service Bulletin A300–57–6115, dated April 4, 2014 (for Model A300 B4–601, B4–603, B4–620, B4–622, B4–605R, B4–622R, F4–605R, F4–622R, and C4–605R Variant F airplanes). If no cracking is found, repeat the HFEC inspection at intervals not to exceed 1,000 flight hours until a rototest inspection required by paragraph (h)(2) of this AD has been done. Where Airbus Service Bulletin

(b) Repetitive Rototest Inspections


(1) If one or more of the hole diameters is outside the tolerance of the nominal diameter, and outside the tolerance of the first and second oversize: Do the applicable corrective actions required by paragraph (i) of this AD.

(2) If all of the hole diameters are within the tolerance of the nominal diameter or the first or second oversize: Do detailed and rototest inspections for cracking of the fastener holes at the left-hand and right-hand sides of the FR40 lower junction, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A300–57–0257, excluding Appendix 01 and including Appendix 02, dated April 4, 2014 (for Model A300 B2–1A, B2–1C, B2K–3C, B2–203, B4–2C, B4–103, and B4–203 airplanes); or Airbus Service Bulletin A300–57–6115, dated April 4, 2014 (for Model A300 B4–601, B4–603, B4–620, B4–622, B4–605R, B4–622R, F4–605R, F4–622R, and C4–605R Variant F airplanes). If no cracking is found, before further flight, install new fasteners of the same diameter in special clearance fit for fasteners 1 through 3 of the FR40 lower junction, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A300–57–0257, excluding Appendix 01 and including Appendix 02, dated April 4, 2014; or Airbus Service Bulletin A300–57–6115, dated April 4, 2014. Repeat the rototest inspection thereafter at intervals not to exceed 7,000 flight cycles. Accomplishment of a rototest inspection required by this paragraph terminates the requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Branch, ANM–116, Transport Airplane Directorate, FAA; or Airbus’s EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) Required for Compliance (RC): Except as required by paragraph (i) of this AD: If any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitute or changes to procedures or tests identified as RC require approval of an AMOC.

(k) Related Information


(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Airbus Service Bulletin A300–57–0257, excluding Appendix 01 and including Appendix 02, dated April 4, 2014.


(iii) For Airbus service information identified in this final rule, contact Airbus SAS, Airworthiness Office—EAW, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email account.airworth-eas@airbus.com; Internet http://www.airbus.com.

(iv) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

(v) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued in Renton, Washington, on June 21, 2016.

Dorr M. Anderson,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016–15356 Filed 7–1–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2008–05–06 for certain The Boeing Company Model 737–100, –200, –300, –400, and –500 series airplanes. AD 2008–05–06 required repetitive inspections for fatigue cracking in the longitudinal floor beam web, upper chord, and lower chord located at certain body stations, and repair if necessary. This new AD requires, for certain airplanes, an inspection to determine if tapered fillers are installed, and related investigative and corrective actions if necessary. This AD was prompted by reports of cracks in the center wing box longitudinal floor beams, upper chord, and lower chord. We are issuing this AD to detect and correct fatigue cracking of the upper and lower chords and web of the longitudinal floor beams, which could result in rapid loss of cabin pressure.