



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-0695; Directorate Identifier 2016-NM-173-AD]

RIN 2120-AA64

Airworthiness Directives; Airbus Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede Airworthiness Directive (AD) 2009-18-16, for certain Airbus Model A310-203, -204, -221, -222, -304, -322, -324, and -325 airplanes. AD 2009-18-16 requires an inspection for cracking of certain fastener holes on certain frames, and related investigative and corrective actions if necessary; and modification of certain fastener holes. Since we issued AD 2009-18-16, an evaluation by the design approval holder (DAH) indicated that the compliance times should be reduced. We are proposing this AD to address the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, 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>. 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 425-227-1221.

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-2017-0695; 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 proposed 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. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Dan Rodina, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-2125; fax 425-227-1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2017-0695; Directorate Identifier 2016-NM-173-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

Fatigue damage can occur locally, in small areas or structural design details, or globally, in widespread areas. Multiple-site damage is widespread damage that occurs in a large structural element such as a single rivet line of a lap splice joining two large skin panels. Widespread damage can also occur in multiple elements such as adjacent frames or stringers. Multiple-site damage and multiple-element damage cracks are typically too

small initially to be reliably detected with normal inspection methods. Without intervention, these cracks will grow, and eventually compromise the structural integrity of the airplane. This condition is known as widespread fatigue damage. It is associated with general degradation of large areas of structure with similar structural details and stress levels. As an airplane ages, widespread fatigue damage (WFD) will likely occur, and will certainly occur if the airplane is operated long enough without any intervention.

The FAA's WFD final rule (75 FR 69746, November 15, 2010) became effective on January 14, 2011. The WFD rule requires certain actions to prevent structural failure due to WFD throughout the operational life of certain existing transport category airplanes and all of these airplanes that will be certificated in the future. For existing and future airplanes subject to the WFD rule, the rule requires that DAHs establish a limit of validity (LOV) of the engineering data that support the structural maintenance program. Operators affected by the WFD rule may not fly an airplane beyond its LOV, unless an extended LOV is approved.

The WFD rule (75 FR 69746, November 15, 2010) does not require identifying and developing maintenance actions if the DAHs can show that such actions are not necessary to prevent WFD before the airplane reaches the LOV. Many LOVs, however, do depend on accomplishment of future maintenance actions. As stated in the WFD rule, any maintenance actions necessary to reach the LOV will be mandated by airworthiness directives through separate rulemaking actions.

In the context of WFD, this action is necessary to enable DAHs to propose LOVs that allow operators the longest operational lives for their airplanes, and still ensure that

WFD will not occur. This approach allows for an implementation strategy that provides flexibility to DAHs in determining the timing of service information development (with FAA approval), while providing operators with certainty regarding the LOV applicable to their airplanes.

On August 24, 2009, we issued AD 2009-18-16, Amendment 39-16012 (74 FR 46342, September 9, 2009) (“AD 2009-18-16”), for certain Airbus Model A310-203, -204, -221, -222, -304, -322, -324, and -325 airplanes. AD 2009-18-16 was prompted by an identification of a structural modification that falls within the scope of the work related to the extension of the service life of the affected airplanes and widespread fatigue damage evaluations. AD 2009-18-16 requires inspecting by rotating probe for cracking of fastener holes H1 through H29 on frames (FRs) 43 through 46 inclusive, and inspecting fastener holes H1 through H29 on FRs 43 through 46 inclusive, to determine the edge distance of the fastener hole, and corrective actions if necessary. We issued AD 2009-18-16 to prevent fatigue cracking of the frame foot run-outs, which could lead to rupture of the frame foot and cracking in adjacent frames and skin, and which could result in reduced structural integrity of the fuselage.

Since we issued AD 2009-18-16, the manufacturer has conducted a new investigation as part of the WFD program and determined that the compliance times must be reduced. The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2016-0197, dated October 5, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), for all Airbus Model A310-203, -204, -221, -222, -304,

-322, -324, and -325 airplanes. EASA AD 2016-0197 supersedes EASA AD 2008-0212, dated December 4, 2008. EASA AD 2008-0212 was the MCAI referred to in FAA AD 2009-18-16. The new MCAI states:

Within the scope of work related to the extension of the service life of A310 design and widespread fatigue damage evaluations, DGAC [Direction Générale de l'Aviation Civile] France issued AD F-2005-078 (EASA approval 2005-3957) [which corresponds to FAA AD 2006-02-06, Amendment 39-14458 (71 FR 3214, January 20, 2006)] to require a structural modification, as defined in Airbus Service Bulletin (SB) A310-53-2124 (Airbus modification 13023), to increase the service life of junctions of center box upper frame bases to upper fuselage arches.

The threshold timescales for accomplishment of the tasks as defined in SB A310-53-2124 were refined and reduced. Consequently, EASA issued AD 2007-0238 to require compliance with Revision 01 of SB A310-53-2124 at the reduced compliance times, superseding (the requirements of) DGAC France AD F-2005-078. Subsequently, Airbus identified reference material that was erroneously introduced into Airbus SB A310-53-2124 Revision 01. As a result, the SB instructions could not be accomplished properly. Operators that tried to apply SB A310-53-2124 at Revision 01 had to contact Airbus; see also Airbus SBIT [service bulletin information telex] ref. 914.0135/08, dated 03 March 2008.

Consequently, [EASA] AD 2007-0238 was revised to exclude reference to Airbus SB A310-53-2124 Revision 01 and to require accomplishment of the task(s) as described in the original SB A310-53-2124 instead, although retaining the reduced compliance times introduced by [EASA] AD 2007-0238 at original issue.

EASA AD 2008-0212, superseding [EASA] AD 2007-0238R1, was published to refer to Airbus SB A310 53-2124 Revision 02, the corrected version that was used to meet the requirements of this [EASA] AD.

Since [EASA] AD 2008-0212 was issued, new investigations in the frame of the Widespread Fatigue

Damage campaign induced thresholds reduction, and Airbus issued SB A310-53-2124 Revision 03.

For the reason described above, this [EASA] AD retains the requirements of EASA AD 2008-0212, which is superseded, and requires accomplishment of modification(s) within reduced compliance time, as published in Airbus SB A310-53-2124 Revision 03.

Required actions include a high frequency eddy current (HFEC) rotating probe inspection for cracking of certain fastener holes on certain frames, and related investigative and corrective actions if necessary; and modification of certain fastener holes. Related investigative actions include an additional HFEC rotating probe inspection for cracking of fastener holes and a check to determine the edge distance of certain holes. Corrective actions include ream out of cracks and repair. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0695.

Related Service Information under 1 CFR part 51

Airbus has issued Airbus Service Bulletin A310-53-2124, Revision 03, dated December 22, 2014. The service information describes procedures for a rototest inspection for cracking between FR 43 through FR 46 on the center box, and the cold expansion (modification) of the most fatigue sensitive fastener holes. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA’s Determination and Requirements of this Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of these same type designs.

Differences Between this NPRM and the MCAI

There is a difference between this NPRM and the MCAI regarding how the compliance times are stated for the accomplishment of the inspection and modification specified in paragraph (j) of this proposed AD. The MCAI states that the accomplishment of the inspection and modification specified in Airbus Service Bulletin A310-53-2124 should be accomplished no later than 6 months (estimated by projection of airplane usage) prior to the thresholds specified in the MCAI. Paragraph (j) of this proposed AD specifies that the accomplishment of the inspection and modification should be done “at the applicable thresholds specified in table 3 to the introductory text of paragraph (j) of this AD.” The compliance times specified in table 3 to the introductory text of paragraph (j) of this proposed AD are based upon the average annual utilization of the Airbus airplanes identified in paragraph (c) of this proposed AD. Based on this information, we calculated that within 6 months an Airbus Model A310 series airplane would have accumulated an average of 300 flight cycles and 978 flight hours.

Costs of Compliance

We estimate that this proposed AD affects 8 airplanes of U.S. registry.

We estimate that it would take about 41 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$20,180 per product. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be \$189,320, or \$23,665 per product.

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions (i.e., additional inspection and modification for certain airplanes) specified in this proposed 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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

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.

The Proposed Amendment

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

PART 39 - AIRWORTHINESS DIRECTIVES

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 removing Airworthiness Directive (AD) 2009-18-16, Amendment 39-16012 (74 FR 46342, September 9, 2009), and adding the following new AD:

Airbus: Docket No. FAA-2017-0695; Directorate Identifier 2016-NM-173-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2009-18-16, Amendment 39-16012 (74 FR 46342, September 9, 2009) (“AD 2009-18-16”).

(c) Applicability

This AD applies to Airbus Model A310–203, –204, –221, –222, –304, –322, –324 and –325 airplanes; certificated in any category; all serial numbers.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Reason

This AD was prompted by an evaluation by the design approval holder indicating that the junctions of center box upper frame bases to the upper fuselage arches are subject to widespread fatigue damage and that the compliance threshold for the modification in AD 2009-18-16 should be reduced. We are issuing this AD to prevent fatigue cracking of the frame foot run-outs, which could lead to rupture of the frame foot and cracking in

adjacent frames and skin, and 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) Inspections and Modification of Fastener Holes

Except for airplanes modified before the effective date of this AD using the Accomplishment Instructions of Airbus Service Bulletin A310-53-2124: At the times specified in paragraph (g)(1) of this AD but no later than the times specified in paragraph (g)(2) of this AD, do a high frequency eddy current (HFEC) rotating probe inspection for cracking of fastener holes H1 through H29 on frames 43 through 46, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A310-53-2124, Revision 03, dated December 22, 2014, except as required by paragraph (h) of this AD. If no cracking is found and the edge distance of the fastener hole is equal to or greater than the distance specified in the Accomplishment Instructions of Airbus Service Bulletin A310-53-2124, Revision 03, dated December 22, 2014, before further flight, do the modification (cold expansion) of the affected fastener holes, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A310-53-2124, Revision 03, dated December 22, 2014. Do all applicable related investigative and corrective actions before further flight.

(1) Inspect at the applicable time specified in table 1 to paragraph (g)(1) of this AD, or within 24 months after the effective date of this AD, whichever occurs later. To establish the average flight time (AFT), take the accumulated flight time (counted from

the take-off up to the landing) and divide by the number of accumulated flight cycles.

This gives the AFT per flight cycle.

Table 1 to paragraph (g)(1) of this AD – *New Compliance times*

Affected airplanes	Compliance Time
Model A310-203, -204, -221, and -222 airplanes	Prior to accumulation of 19,600 flight cycles or 39,200 flight hours since first flight of the airplane, whichever occurs first.
Model A310-304, -322, -324, and -325 airplanes with an AFT of less than or equal to 3.16 flight hours	Prior to accumulation of 22,400 flight cycles or 62,700 flight hours since first flight of the airplane, whichever occurs first.
Model A310-304, -322, -324, and -325 airplanes with an AFT greater than 3.16 flight hours	Prior to accumulation of 19,800 flight cycles or 99,200 flight hours since first flight of the airplane, whichever occurs first.

(2) Inspect at the later of the times specified in paragraphs (g)(2)(i) and (g)(2)(ii) of this AD.

(i) At the applicable time indicated in table 2 to paragraph (g)(2)(i) of this AD.

Airbus Model A310-304, -322, -324, and -325 airplanes with an AFT equal to or less than 3.17 flight hours are short range airplanes. Airbus Model A310-304, -322, -324, and -325 airplanes with an AFT exceeding 3.17 flight hours are long range airplanes. For this paragraph, to establish the average flight time, take the accumulated flight time (counted from the take-off up to the landing) and divide by the number of accumulated flight cycles. This provides the AFT per flight cycle.

Table 2 to paragraph (g)(2)(i) of this AD – Retained Compliance Times

Affected Airplanes	Inspection/Modification Compliance Time, whichever occurs later	
Model A310-304, -322, -324 and -325 short range airplanes	Prior to accumulation of 26,500 flight cycles or 74,300 flight hours since first flight of the airplane, whichever occurs first	Within 3,000 flight cycles after October 14, 2009 (the effective date of AD 2009-18-16), without exceeding 29,200 flight cycles or 81,800 flight hours since first flight, whichever occurs first
Model A310-304, -322, -324 and -325 long range airplanes	Prior to accumulation of 23,400 flight cycles or 117,100 flight hours since first flight of the airplane, whichever occurs first	Within 3,000 flight cycles after October 14, 2009 (the effective date of AD 2009-18-16), without exceeding 25,800 flight cycles or 129,000 flight hours since first flight, whichever occurs first
Model A310-203, -204, -221, and A310-222	Prior to accumulation of 23,400 flight cycles or 46,800 flight hours since first flight of the airplane, whichever occurs first	Within 3,000 flight cycles after October 14, 2009 (the effective date of AD 2009-18-16), without exceeding 28,800 flight cycles or 57,700 flight hours since first flight, whichever occurs first

(ii) Within 500 flight cycles or 800 flight hours after October 14, 2009 (the effective date of AD 2009-18-16), whichever occurs first.

(h) Service Information Exception

Where Airbus Service Bulletin A310-53-2124, Revision 03, dated December 22, 2014, specifies to contact Airbus for appropriate action, and specifies that action as “RC”

(Required for Compliance): Before further flight, accomplish corrective actions in accordance with the procedures specified in paragraph (l)(2) of this AD.

(i) Airplanes Modified per Revision 01 of the Service Information

For airplanes modified before the effective date of this AD using Airbus Service Bulletin A310-53-2124, Revision 01, dated May 3, 2007: Unless already accomplished, before further flight, do applicable corrective actions 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).

(j) Additional Inspection and Modification

Except as provided by paragraphs (j)(1) and (j)(2) of this AD, as applicable: At the applicable thresholds specified in table 3 to the introductory text of paragraph (j) of this AD, contact the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or EASA; or Airbus's EASA DOA for additional inspection and modification instructions. Accomplish those instructions within the compliance times provided by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or EASA; or Airbus's EASA DOA.

Table 3 to the Introductory Text of Paragraph (j) of this AD – *Additional Inspection and Modification*

Affected airplanes	Thresholds (Flight cycles or flight hours, whichever occurs first after accomplishment of the inspection and modification specified in Airbus Service Bulletin A310-53-2124)	
	Inspection threshold	Modification threshold
Model A310-203, -204, -221, and -222 airplanes	30,200 flight cycles or 68,122 flight hours	45,500 flight cycles or 102,722 flight hours
Model A310-304, -322, -324, and -325 airplanes	37,000 flight cycles or 103,522 flight hours	55,700 flight cycles or 155,722 flight hours

(1) For Model A310-203, -204, -221, and -222 airplanes: No additional inspection is required if the inspection and modification specified in Airbus Service Bulletin A310-53-2124 was done after the accumulation of 29,500 flight cycles and 70,900 flight hours since the first flight of the airplane.

(2) For Model A310-304, -322, -324, and -325 airplanes: No additional inspection is required if the inspection and modification specified in Airbus Service Bulletin A310-53-2124 was done after the accumulation of 22,600 flight cycles and 69,400 flight hours since the first flight of the airplane.

(k) Credit for Previous Actions

This paragraph provides credit for the actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the Accomplishment Instructions of Airbus Service Bulletin A310-53-2124, dated April 4, 2005; or Airbus Service Bulletin A310-53-2124, Revision 02, dated May 22, 2008.

(l) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to the attention of the person identified in paragraph (m)(2) of this AD. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) Contacting the Manufacturer: As of the effective date of this AD, for any 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 EASA; 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 provided by paragraph (h) 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 substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

(m) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2016-0197, dated October 5, 2016, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0695.

(2) For more information about this AD, contact Dan Rodina, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone: 425-227-2125; fax: 425-227-1149.

(3) For service information identified in this AD, 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>. 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. Issued in Renton, Washington, on June 29, 2017.

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

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