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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2015-3985; Directorate Identifier 2014-NM-182-AD; Amendment 39-18708; AD 2016-23-01]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Airbus Airplanes**

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

**ACTION:** Final rule.

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**SUMMARY:** We are superseding Airworthiness Directive (AD) 2010-04-03 for all Airbus Model A310 series airplanes. AD 2010-04-03 required accomplishing repetitive detailed inspections for cracking around the fastener holes in certain wing top skin panels between the front and rear spars on the left- and right-hand sides of the fuselage, and repair if necessary. This new AD continues to require the repetitive detailed inspections, and also requires supplemental repetitive ultrasonic inspections for cracking around the fastener holes in wing top skin panels 1 and 2 at ribs 2 and 3, and repair if necessary. This AD was prompted by development of an ultrasonic inspection program to allow for earlier crack detection and extended repetitive inspection intervals. We are issuing this AD to detect and correct fatigue cracking around the fastener holes, which could result in reduced structural integrity of the airplane.

**DATES:** This AD is effective December 15, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 15, 2016.

**ADDRESSES:** For 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](mailto: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. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-3985.

## 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-2015-3985; 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 address for the Docket Office (telephone 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**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:** **Discussion**

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 to supersede AD 2010-04-03, Amendment 39-16196 (75 FR 6852, February 12, 2010) ("AD 2010-04-03"). AD 2010-04-03 applied to all Airbus Model A310 series airplanes. The SNPRM published in the Federal Register on July 11, 2016 (81 FR 44812) ("the SNPRM"). We preceded the SNPRM with a notice of proposed rulemaking (NPRM) that published in the Federal Register on October 13, 2015 (80 FR 61327) ("the NPRM"). The NPRM was prompted by development of an ultrasonic inspection program to allow for earlier crack detection and extended repetitive inspection intervals. The NPRM proposed to retain the requirements of AD 2010-04-03, and proposed to require supplemental repetitive ultrasonic inspections for cracking around the fastener holes in wing top skin panels 1 and 2 at rib 2, and repair if necessary. The SNPRM proposed to expand the inspection area to include rib 3 due to widespread fatigue damage. We are issuing this AD to detect and correct fatigue cracking around the fastener holes, which could result in reduced structural integrity of the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2016-0005, dated January 7, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition on all Airbus Model A310 series airplanes. The MCAI states:

Following scheduled maintenance, cracks were found around the wing top skin panels fastener holes at Rib 2, between Stringer (STG) 2 and STG14.

This condition, if not detected and corrected, could affect the structural integrity of the aeroplane. The General Visual Inspection required by the existing applicable Airworthiness Limitation Items (ALI) tasks may not be adequate to detect these cracks.

To address this issue, Airbus developed an inspection programme based on repetitive detailed inspections (DET) to ensure that any visible cracks in the wing top skin panels 1 and 2 along Rib 2 are detected in time and repaired appropriately. EASA issued AD 2008-0211 to require implementation of this inspection programme.

After that [EASA] AD was issued, Airbus improved the inspection programme with an ultrasonic inspection to allow earlier crack detection, to subsequently reduce the scope of potential repair action, and to extend the intervals of the repetitive inspections.

Consequently, EASA issued AD 2014-0200 (later revised), superseding [EASA] AD 2008-0211, retaining its requirements, and to require supplementary repetitive ultrasonic inspections [for cracking] of the wing top skin panel 1 and 2 between STG2 and STG10 at Rib 2 [and repair if needed].

Since EASA AD 2014-0020R1 was issued, a widespread fatigue damage analysis concluded that the inspection programme has to be extended to include the wing top skin panels at Rib 3

attachments. For the reasons described above, this [EASA] AD retains the requirements of EASA AD 2014-0200R1, which is superseded, and extends the inspection area to include Rib 3.

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-2015-3985.

## **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the SNPRM or on the determination of the cost to the public.

## **Clarification of Requirements**

We have clarified the terminating action sentence in paragraph (k) of this AD by adding a reference to paragraph (g) of this AD.

We have clarified the average flight time in paragraph (l)(3) of this AD for subsequent inspections after the second inspection interval.

## **Conclusion**

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the SNPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the SNPRM.

## **Related Service Information Under 1 CFR part 51**

Airbus has issued Service Bulletin A310-57-2096, Revision 03, dated June 30, 2015. This service information describes procedures for detailed and ultrasonic inspections for cracking around the fastener holes of wing top skin panels 1 and 2, at ribs 2 and 3, on the left- and right-hand sides of the fuselage. 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.

## **Costs of Compliance**

We estimate that this AD affects 28 airplanes of U.S. registry.

We also estimate that it takes about 8 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 \$19,040, or \$680 per product.

We estimate that it takes about 15 work-hours per product to do any necessary on-condition actions that are required based on the results of the inspections. Required parts will cost about \$10,000 per product. We have no way of determining the number of aircraft that might need these actions.

## **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**

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) 2010-04-03, Amendment 39-16196 (75 FR 6852, February 12, 2010), and adding the following new AD:



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**2016-23-01 Airbus:** Amendment 39-18708; Docket No. FAA-2015-3985; Directorate Identifier 2014-NM-182-AD.

**(a) Effective Date**

This AD is effective December 15, 2016.

**(b) Affected ADs**

This AD replaces AD 2010-04-03, Amendment 39-16196 (75 FR 6852, February 12, 2010) ("AD 2010-04-03").

**(c) Applicability**

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

**(d) Subject**

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

**(e) Reason**

This AD was prompted by the development of an ultrasonic inspection program to allow for earlier crack detection and extended repetitive inspection intervals. We are issuing this AD to detect and correct fatigue cracking around the fastener holes in certain wing top skin panels between the front and rear spars on the left- and right-hand sides of the fuselage, 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 Inspections**

Except as required by paragraph (i) of this AD: Within the initial compliance time and thereafter at the repetitive intervals specified in paragraphs (h)(1) through (h)(3) of this AD, as applicable, accomplish the actions specified in paragraphs (g)(1) and (g)(2) of this AD concurrently and in sequence, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A310-57-2096, Revision 03, dated June 30, 2015, except as provided by paragraph (j) of this AD.

(1) Accomplish a detailed inspection for cracking around the fastener holes in the wing top skin panels 1 and 2, along ribs 2 and 3, between the front and rear spars on the left- and right-hand sides of the fuselage.

(2) Accomplish an ultrasonic inspection for cracking around the fastener holes in the wing top skin panels 1 and 2, along ribs 2 and 3, between stringer (STG) 2 and STG10 on the left- and right-hand sides of the fuselage.

#### **(h) Compliance Times for Airplanes Not Previously Inspected**

(1) For Model A310-203, -204, -221, and -222 airplanes: Do the actions required by paragraphs (g)(1) and (g)(2) of this AD at the later of the times specified in paragraphs (h)(1)(i) and (h)(1)(ii) of this AD. Repeat the inspections specified in paragraphs (g)(1) and (g)(2) of this AD thereafter at intervals not to exceed 2,000 flight cycles or 4,100 flight hours, whichever occurs first.

(i) Prior to the accumulation of 18,700 flight cycles or 37,400 flight hours since first flight of the airplane, whichever occurs first.

(ii) Within 30 days after the effective date of this AD.

(2) For Model A310-304, -322, -324, and -325 airplanes having an average flight time (AFT) of less than 4 hours: Do the actions required by paragraphs (g)(1) and (g)(2) of this AD at the later of the times specified in paragraphs (h)(2)(i) and (h)(2)(ii) of this AD. Repeat the inspections specified in paragraphs (g)(1) and (g)(2) of this AD thereafter at intervals not to exceed 2,000 flight cycles or 5,600 flight hours, whichever occurs first.

(i) Prior to the accumulation of 17,300 flight cycles or 48,400 flight hours since first flight of the airplane, whichever occurs first.

(ii) Within 30 days after the effective date of this AD.

(3) For Model A310-304, -322, -324, and -325 airplanes having an AFT of equal to or more than 4 hours: Do the actions required by paragraphs (g)(1) and (g)(2) of this AD at the later of the times specified in paragraphs (h)(3)(i) and (h)(3)(ii) of this AD. Repeat the inspections specified in paragraphs (g)(1) and (g)(2) of this AD thereafter at intervals not to exceed 1,500 flight cycles or 7,500 flight hours, whichever occurs first.

(i) Prior to the accumulation of 12,800 flight cycles or 64,300 flight hours since first flight of the airplane, whichever occurs first.

(ii) Within 30 days after the effective date of this AD.

#### **(i) Compliance Times for Airplanes Previously Inspected**

For airplanes previously inspected before the effective date of this AD using Airbus Service Bulletin A310-57-2096, dated May 6, 2008; Airbus Service Bulletin A310-57-2096, Revision 01, dated August 5, 2010; or Airbus Service Bulletin A310-57-2096, Revision 02, dated March 5, 2014: At the applicable compliance times specified in paragraphs (i)(1), (i)(2), and (i)(3) of this AD, accomplish the actions specified in paragraphs (g)(1) and (g)(2) concurrently and in sequence, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A310-57-2096, Revision 03, dated June 30, 2015. Repeat the inspections specified in paragraphs (g)(1) and (g)(2) of this AD thereafter at the repetitive intervals specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD, as applicable.

(1) For Model A310-203, -204, -221, and -222 airplanes: Do the actions required by paragraphs (g)(1) and (g)(2) of this AD within 3,500 flight hours or 1,700 flight cycles, whichever occurs first since the most recent inspection.

(2) For Model A310-304, -322, -324, and -325 airplanes having an AFT of less than 4 hours: Do the actions required by paragraphs (g)(1) and (g)(2) of this AD within 4,600 flight hours or 1,600 flight cycles, whichever occurs first since the most recent inspection.

(3) For Model A310-304, -322, -324, and -325 airplanes having an AFT of equal to or more than 4 hours: Do the actions required by paragraphs (g)(1) and (g)(2) of this AD within 6,100 flight hours or 1,200 flight cycles, whichever occurs first since the most recent inspection.

## **(j) Compliance Times if No Ultrasonic Equipment is Available**

If no ultrasonic equipment is available for the initial or second inspection required by paragraph (g) or (h) of this AD, accomplish the detailed inspection specified in paragraph (g)(1) of this AD within the applicable compliance times specified in paragraphs (j)(1) and (j)(2) of this AD. After accomplishing the detailed inspection, do the inspections specified in paragraphs (g)(1) and (g)(2) of this AD at the applicable compliance times specified by paragraphs (i)(1), (i)(2), and (i)(3) of this AD. Subsequently, repeat the inspections specified in paragraphs (g)(1) and (g)(2) of this AD thereafter at the applicable repetitive intervals specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD.

(1) For airplanes not previously inspected before the effective date of this AD using the service information identified in paragraph (j)(2)(i), (j)(2)(ii), or (j)(2)(iii) of this AD: Do the actions required by paragraph (g)(1) of this AD within the initial compliance time specified by paragraphs (h)(1), (h)(2), and (h)(3) of this AD, as applicable.

(2) For airplanes previously inspected before the effective date of this AD using the service information identified in paragraph (j)(2)(i), (j)(2)(ii), or (j)(2)(iii) of this AD: Do the actions required by paragraph (g)(1) of this AD within the applicable compliance times specified in paragraphs (i)(1), (i)(2), and (i)(3) of this AD.

(i) Airbus Service Bulletin A310-57-2096, dated May 6, 2008.

(ii) Airbus Service Bulletin A310-57-2096, Revision 01, dated August 5, 2010.

(iii) Airbus Service Bulletin A310-57-2096, Revision 02, dated March 5, 2014.

## **(k) Repair of Cracking**

If any cracking is found during any inspection required by paragraph (g), (h), (i), or (j) of this AD, before further flight, repair the cracking 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). Accomplishing the repair specified in this paragraph terminates the repetitive inspections required by paragraph (g), (h), (i), or (j) of this AD, as applicable, for the repaired area only.

## **(l) Definition of Average Flight Time (AFT)**

For the purposes of this AD, the AFT should be established as specified in paragraphs (l)(1), (l)(2), and (l)(3) of this AD for the determination of the compliance times.

(1) The inspection threshold is defined as the total flight hours accumulated (counted from take-off to touch-down), divided by the total number of flight cycles accumulated at the effective date of this AD.

(2) The initial inspection interval is defined as the total flight hours accumulated divided by the total number of flight cycles accumulated at the time of the initial inspection threshold.

(3) The second inspection interval is defined as the total flight hours accumulated divided by the total number of flight cycles accumulated between the initial and second inspection threshold. For all inspection intervals onwards, the average flight time is the flight hours divided by the flight cycles accumulated between the last two inspections.

## **(m) Credit for Previous Actions**

This paragraph provides credit for the actions required by paragraph (g)(1) of this AD, if those actions were performed before the effective date of this AD using the applicable service information identified in paragraph (m)(1), (m)(2), or (m)(3) of this AD.

(1) Airbus Service Bulletin A310-57-2096, dated May 6, 2008, which was incorporated by reference in AD 2010-04-03.

(2) Airbus Service Bulletin A310-57-2096, Revision 01, dated August 5, 2010, which is not incorporated by reference in this AD.

(3) Airbus Service Bulletin A310-57-2096, Revision 02, dated March 5, 2014, which is not incorporated by reference in this AD.

#### **(n) 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 ATTN: 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. 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. The AMOC approval letter must specifically reference this AD.

(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 the 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 required by paragraph (k) 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.

#### **(o) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2016-0005, dated January 7, 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-2015-3985.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (p)(4) and (p)(5) of this AD.

#### **(p) 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.

(3) The following service information was approved for IBR on December 15, 2016.

(i) Airbus Service Bulletin A310-57-2096, Revision 03, dated June 30, 2015.

(ii) Reserved.

(4) 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](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>.

(5) 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.

(6) 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 October 28, 2016.

Dionne Palermo,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.