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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2016-5591; Directorate Identifier 2014-NM-193-AD; Amendment 39-18651; AD 2016-19-02]**

**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) 2005-15-07 for certain Airbus Model A320-111 airplanes and Model A320-200 series airplanes. AD 2005-15-07 required installing insulator and cable ties to the electrical cables of the S routes at the gaps in the raceway in the wing trailing edge and the wing tip and wing root areas. This new AD requires additional modifications in the trailing edges of both wings. This new AD also removes airplanes from the applicability. This AD was prompted by reports of wire chafing in the left-hand wing trailing edge. We are issuing this AD to prevent wire chafing in the trailing edge of the wings, which could result in a short circuit in the vicinity of the fuel tanks, consequently resulting in a potential source of ignition in a fuel tank vapor space and consequent fuel tank explosion.

**DATES:** This AD is effective October 24, 2016.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of October 24, 2016.

**ADDRESSES:** For service information identified in this final rule, contact Airbus, Airworthiness Office–EIAS, 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-2016-5591.

## 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-2016-5591; 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:** Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149.

## SUPPLEMENTARY INFORMATION:

### Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2005-15-07, Amendment 39-14196 (70 FR 43024, July 26, 2005) ("AD 2005-15-07"). AD 2005-15-07 applied to certain Airbus Model A320-111 airplanes and Model A320-200 series airplanes. The NPRM published in the Federal Register on April 20, 2016 (81 FR 23199). The NPRM was prompted by reports of wire chafing in the left-hand wing trailing edge. The NPRM proposed to continue to require installing insulator and cable ties to the electrical cables of the S routes at the gaps in the raceway in the wing trailing edge and the wing tip and wing root areas. The NPRM proposed to require additional modifications in the trailing edges of both wings. The NPRM also proposed to remove airplanes from the applicability. We are issuing this AD to prevent wire chafing in the trailing edge of the wings, which could result in a short circuit in the vicinity of the fuel tanks, consequently resulting in a potential source of ignition in a fuel tank vapor space and consequent fuel tank explosion.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2014-0198, dated September 5, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for certain Airbus Model A320-211, -212, and -231 airplanes. The MCAI states:

Prompted by an accident \* \* \*, the FAA published Special Federal Aviation Regulation (SFAR) 88 [(66 FR 23086, May 7, 2001)], and the Joint Aviation Authorities (JAA) published Interim Policy INT/POL/25/12.

Prompted by that regulation, the results of an Airbus review of the A320 type design identified, on certain aeroplanes, a possible ignition source in fuel tank vapour space(s). That condition, if not corrected, could result in a fuel tank explosion and consequent loss of the aeroplane.

It was, therefore, decided to modify the cable routes of the wing trailing edge, aft of the rear spar and wing tip of those aeroplanes, to be applied in service in accordance with the instructions of Airbus Service Bulletin (SB) A320-24-1062 Revision 05. Following that decision, DGAC France issued AD F-2004-173 (EASA approval number 2004-10570) to require that modification.

After that AD was issued, it was found that additional work, introduced by Airbus SB A320-24-1062 Revision 05, was not included as part of the normal accomplishment instructions, which meant that the additional work might not be accomplished. Consequently, EASA issued AD 2008-0051, retaining the requirements of DGAC France AD F-2004-173 [which corresponds to FAA AD 2005-15-07], which was superseded, and required the accomplishment of the additional work in accordance with the instructions of Airbus SB A320-24-1062 Revision 06. EASA AD 2008-0051 was revised to reduce the Applicability and to add a clarification to paragraph (2).

After EASA AD 2008-0051R1 was issued, some operators reported wire chafing in the left hand wing trailing edge. Investigation established that the wire chafing, initiated at raceway gaps, was either due to maintenance action(s), or to structure vibrations.

Prompted by these findings, Airbus developed two modifications to prevent any further wire chafing by introducing an additional protection at raceway gaps and a new cable standard in the trailing edges of both wings.

Airbus published SB A320-92-1049 and SB A320-92-1052 to make these modifications available for in-service application. At the time of incorporation of Airbus SB A320-24-1062, these two modifications were considered recommended only.

EASA recently determined that this condition, if not corrected, could lead to a short circuit on 115 volts in the vicinity of fuel tanks, consequently creating another risk of ignition source in a fuel tank vapour space.

For the reasons described above, this [EASA] AD retains the requirements of EASA AD 2008-0051R1, which is superseded, and requires modifications to install the additional anti-chafing protection and the new cable standard.

This AD also removes Model A320-214, -232, and -233 airplanes from the applicability because those airplane models have been modified in production or in service. This AD also removes Model A320-111 airplanes from the applicability because those airplanes are no longer on the U.S. type certificate data sheet (there are no more A320-111 airplanes in service in the U.S. and none in storage). 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-2016-5591.

## **Comments**

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

## **Conclusion**

We reviewed the available data and determined that air safety and the public interest require adopting this AD as proposed, except for minor editorial changes. We have determined that these minor changes:

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

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

We reviewed Airbus Service Bulletins A320-92-1049, Revision 01, dated November 28, 2011; A320-92-1052, dated December 5, 2007; and A320-24-1062, Revision 07, dated November 28, 2011.

Airbus Service Bulletin A320-92-1049, Revision 01, dated November 28, 2011, describes procedures for installing the additional anti-chafing protection.

Airbus Service Bulletin A320-92-1052, dated December 5, 2007, describes procedures for replacing the current electrical cable with the new standard one.

Airbus Service Bulletin A320-24-1062, Revision 07, dated November 28, 2011, describes procedures for installing insulator and cable ties to the electrical cables of the S routes at the gaps in the raceway in the wing trailing edge and the wing tip and wing root areas.

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 47 airplanes of U.S. registry.

The actions required by AD 2005-15-07, and retained in this AD take about 35 work-hours per product, at an average labor rate of \$85 per work-hour. Required parts cost about \$0 per product. Based on these figures, the estimated cost of the actions that were required by AD 2005-15-07 is \$2,975 per product.

We also estimate that it would take about 76 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$13,000 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$914,620, or \$19,460 per product.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

## **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) 2005-15-07, Amendment 39-14196 (70 FR 43024, July 26, 2005), and adding the following new AD:



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**2016-19-02 Airbus:** Amendment 39-18651; Docket No. FAA-2016-5591; Directorate Identifier 2014-NM-193-AD.

**(a) Effective Date**

This AD is effective October 24, 2016.

**(b) Affected ADs**

This AD replaces AD 2005-15-07, Amendment 39-14196 (70 FR 43024, July 26, 2005) ("AD 2005-15-07").

**(c) Applicability**

This AD applies to Airbus Model A320-211, -212, and -231 airplanes, certificated in any category, all manufacturer serial numbers except those on which Airbus Modification 22626 has been embodied in production.

**(d) Subject**

Air Transport Association (ATA) of America Code 24, Electrical Power; and Code 92.

**(e) Reason**

This AD was prompted by reports of wire chafing in the left-hand wing trailing edge. We are issuing this AD to prevent wire chafing in the trailing edge of the wings, which could result in a short circuit in the vicinity of the fuel tanks, consequently resulting in a potential source of ignition in a fuel tank vapor space and consequent fuel tank explosion.

**(f) Compliance**

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

**(g) Retained Modification, With Revised Service Information**

This paragraph restates the requirements of paragraph (f) of AD 2005-15-07, with revised service information. Within 60 months after August 30, 2005 (the effective date of AD 2005-15-07), install insulator and cable ties to the electrical cables of the S routes at the gaps in the raceway in the wing trailing edge and the wing tip and wing root areas, in accordance with Airbus Service Bulletin A320-24-1062, Revision 05, dated June 27, 2002; or the Accomplishment Instructions of Airbus Service Bulletin A320-24-1062, Revision 07, dated November 28, 2011. As of the effective date of this AD, only Airbus Service Bulletin A320-24-1062, Revision 07, dated November 28, 2011, may be used.

### **(h) New Requirement of This AD: Modification of Trailing Edges**

Within 60 months after the effective date of this AD, modify the trailing edges of both wings by accomplishing the actions specified in paragraphs (h)(1) and (h)(2) of this AD.

(1) Install the additional anti-chafing protection in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-92-1049, Revision 01, dated November 28, 2011.

(2) Replace the current electrical cable with the new standard one in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-92-1052, dated December 5, 2007. During the replacement, ensure that the anti-chafing protection specified in Airbus Service Bulletin A320-92-1049, Revision 01, dated November 28, 2011, as required by paragraph (h)(1) of this AD, remains in place.

### **(i) New Additional Modification**

For airplanes on which the installation specified in Airbus Service Bulletin A320-24-1062, Revision 05, dated June 27, 2002, has been done: Within 60 months after the effective date of this AD, install insulators and cable ties, in accordance with "Modification—Additional Work (Introduced at Revision No. 06)" of the Accomplishment Instructions of Airbus Service Bulletin A320-24-1062, Revision 07, dated November 28, 2011.

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

(1) This paragraph provides credit for actions required by paragraphs (g) and (i) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-24-1062, Revision 06, dated June 26, 2007, which is not incorporated by reference in this AD.

(2) This paragraph provides credit for actions required by paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-92-1049, dated July 23, 2007, which is not incorporated by reference in this AD.

### **(k) 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: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; 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 European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

## **(l) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2014-0198, dated September 5, 2014, 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-2016-5591.

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

## **(m) 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 October 24, 2016.

(i) Airbus Service Bulletin A320-24-1062, Revision 07, dated November 28, 2011.

(ii) Airbus Service Bulletin A320-92-1049, Revision 01, dated November 28, 2011.

(iii) Airbus Service Bulletin A320-92-1052, dated December 5, 2007. (4) For service information identified in this AD, contact Airbus, Airworthiness Office–EIAS, 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 September 6, 2016.

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