

[Federal Register Volume 81, Number 86 (Wednesday, May 4, 2016)]

[Rules and Regulations]

[Pages 26677-26680]

From the Federal Register Online via the Government Publishing Office [www.gpo.gov]

[FR Doc No: 2016-08956]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2015-5811; Directorate Identifier 2014-NM-158-AD; Amendment 39-18489; AD 2016-08-13]**

**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) 2004-19-11 for certain Airbus Model A320 series airplanes. AD 2004-19-11 required modification of the inner rear spar web of the wing, cold expansion of the attachment holes of the forward pintle fitting and the actuating cylinder anchorage of the main landing gear (MLG), repetitive ultrasonic inspections for cracking of the rear spar of the wing, and corrective action if necessary. AD 2004-19-11 also provided optional terminating action for the repetitive inspections. This new AD retains the requirements of AD 2004-19-11, and requires the previously optional terminating action. This AD was prompted by a determination that the previously optional terminating action is necessary to address the unsafe condition. We are issuing this AD to prevent fatigue cracking of the inner rear spar, which may lead to reduced structural integrity of the wing and the MLG.

**DATES:** This AD becomes effective June 8, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of June 8, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of November 5, 2004 (69 FR 58828, October 1, 2004).

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of June 30, 2000 (65 FR 34069, May 26, 2000).

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of February 14, 1994 (59 FR 1903, January 13, 1994).

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of June 11, 1993 (58 FR 27923, May 12, 1993).

**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-2015-5811.

## **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-2015-5811; 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 2004-19-11, Amendment 39-13805 (69 FR 58828, October 1, 2004) ("AD 2004-19-11"). AD 2004-19-11 applied to certain Airbus Model 320 series airplanes. The NPRM published in the Federal Register on November 27, 2015 (80 FR 74058) ("the NPRM"). The NPRM was prompted by a determination that the previously optional terminating action is necessary to address the unsafe condition. The NPRM proposed to retain the requirements of AD 2004-19-11, and requires the previously optional terminating action. We are issuing this AD to prevent fatigue cracking of the inner rear spar, which may lead to reduced structural integrity of the wing and the MLG.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2014-0169, dated July 17, 2014, corrected July 22, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition on certain Airbus Model 320 series airplanes. The MCAI states:

During centre fuselage certification full scale fatigue test, cracks were found on the inner rear spar at holes position 52 on the right hand wing due to fatigue aspects.

This condition, if not detected and corrected, could affect the structural integrity of the aeroplane.

To prevent such cracks, Airbus developed modifications, which were introduced in production and in service through several Airbus Service Bulletins (SB).

DGAC France issued \* \* \* [an earlier AD], which was subsequently superseded by [DGAC] AD 2001-249 [which corresponds with FAA AD 2004-19-11, Amendment 39-13805 (69 FR 58828, October 1, 2004)], to require modification of the rear spar on some aeroplanes, post-modification repetitive inspections and, depending on findings, accomplishment of a repair. DGAC France AD 2001-249 also specified that

modification in accordance with Airbus SB A320-57-1089 (in-service equivalent to Airbus mod 24591) constituted (optional) terminating action for the repetitive inspections.

Since that [DGAC] AD [2001-249] was issued, in the framework of the A320 Extended Service Goal (ESG), it has been determined that Airbus mod 24591 is necessary to allow aeroplanes to operate up to the new ESG limit.

For the reasons described above, this [EASA] AD retains the requirements of DGAC France AD 2001-249, which is superseded, and requires modification of all pre-mod 24591 aeroplanes.

The modification includes modifying all specified fastener holes in the inner rear spar of the wing. 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-2015-5811.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comment received. United Airlines provided its support for the content of the NPRM.

### **Explanation of Changes Made to This AD**

We have added a new paragraph (l)(1) to this AD to provide 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 A320-57-1060, Revision 1, dated April 26, 1993. We have redesignated paragraphs (l)(1) and (l)(2) of the proposed AD as paragraphs (l)(2) and (l)(3) of this AD.

### **Conclusion**

We reviewed the relevant data, considered the comments received, 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 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**

Airbus has issued Airbus Service Bulletin A320-57-1089, Revision 03, dated February 9, 2001. This service information describes procedures for modification of the airplane by accomplishing cold re-expansion of the holes in the inner rear spar for the attachment of gear rib 5, forward pintle fitting, and actuating cylinder anchorage; and the installation of interference fit fasteners in the rear spar and gear rib 5. 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 84 airplanes of U.S. registry.

The actions required by AD 2004-19-11, and retained in this AD take about 684 work-hours per product, at an average labor rate of \$85 per work-hour. Required parts cost about \$13,644 per

product. Based on these figures, the estimated cost of the actions that were required by AD 2004-19-11 is \$71,784 per product.

We also estimate that it takes about 980 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost about \$32,727 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$9,746,268, or \$116,027 per product.

We have received no definitive data that would enable us to provide cost estimates 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**

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) 2004-19-11, Amendment 39-13805 (69 FR 58828, October 1, 2004), and adding the following new AD:



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**2016-08-13 Airbus:** Amendment 39-18489. Docket No. FAA-2015-5811; Directorate Identifier 2014-NM-158-AD.

**(a) Effective Date**

This AD becomes effective June 8, 2016.

**(b) Affected ADs**

This AD replaces AD 2004-19-11, Amendment 39-13805 (69 FR 58828, October 1, 2004) ("AD 2004-19-11").

**(c) Applicability**

This AD applies to Airbus Model A320-211, -212, -214, -231, -232, and -233 airplanes, certificated in any category, all manufacturer serial numbers, except those on which Airbus modification (mod) 24591 has been embodied in production.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by reports of fatigue cracking of the inner rear spar of the wing and also by a determination that the modification of the inner rear spar is necessary to address the unsafe condition. We are issuing this AD to prevent fatigue cracking of the inner rear spar, which may lead to reduced structural integrity of the wing and the main landing gear (MLG).

**(f) Compliance**

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

**(g) Retained Modification of Inner Rear Spar Web of the Wing, With Change to Acceptable Service Information**

This paragraph restates the requirements of paragraph (a) of AD 2004-19-11, with a change to acceptable service information. For airplanes having manufacturer's serial numbers (MSNs) 003 through 008 inclusive, and 010 through 021 inclusive, except airplanes modified as specified in Airbus Service Bulletin A320-57-1089, dated December 22, 1996; Revision 01, dated April 17, 1997; Revision 02, dated November 6, 1998; or Revision 03, dated February 9, 2001: Prior to the accumulation of 12,000 total flight cycles, or within 500 flight cycles after June 11, 1993 (the effective date of AD 93-08-15, Amendment 39-8563 (58 FR 27923, May 12, 1993)), whichever occurs later, modify the inner rear spar web of the wing in accordance with Airbus Service Bulletin A320-57-1004, Revision 1, dated September 24, 1992; or Revision 2, dated June 14, 1993. As of the

effective date of this AD, only Airbus Service Bulletin A320-57-1004, Revision 2, dated June 14, 1993, may be used for the actions required by this paragraph.

**(h) Retained Cold Expansion of Holes at Forward Pintle Fitting and Actuating Cylinder Anchorage of the Main Landing Gear, With Change to Acceptable Service Information**

This paragraph restates the requirements of paragraph (b) of AD 2004-19-11, with a change to acceptable service information. For airplanes having MSNs 002 through 051 inclusive, except airplanes modified as specified in Airbus Service Bulletin A320-57-1089, dated December 22, 1996; Revision 01, dated April 17, 1997; Revision 02, dated November 6, 1998; or Revision 03, dated February 9, 2001: Prior to the accumulation of 12,000 total flight cycles, or within 2,000 flight cycles after February 14, 1994 (the effective date of AD 93-25-13, Amendment 39-8777 (59 FR 1903, January 13, 1994)), whichever occurs later, accomplish the requirements of paragraphs (h)(1) and (h)(2) of this AD in accordance with Airbus Service Bulletin A320-57-1060, dated December 8, 1992; Revision 1, dated April 26, 1993; or Revision 2, dated December 16, 1994. As of the effective date of this AD, only Airbus Service Bulletin A320-57-1060, Revision 2, dated December 16, 1994, may be used for the actions required by this paragraph.

(1) Perform a cold expansion of all the attachment holes for the forward pintle fitting of the main landing gear (MLG), except for the holes that are for taper-lok bolts.

(2) Perform a cold expansion of the holes at the actuating cylinder anchorage of the MLG.

**(i) Retained Repetitive Ultrasonic Inspections for Cracking of the Rear Spar of the Wing, With No Changes**

This paragraph restates the requirements of paragraphs (c), (d), and (e) of AD 2004-19-11, with no changes. Except for airplanes modified as specified in Airbus Service Bulletin A320-57-1089, dated December 22, 1996; Revision 01, dated April 17, 1997; Revision 02, dated November 6, 1998; or Revision 03, dated February 9, 2001: Do the actions specified in paragraphs (i)(1) and (i)(2) of this AD.

(1) Do an ultrasonic inspection for cracking of the rear spar of the wing, in accordance with Airbus Service Bulletin A320-57-1088, Revision 04, dated August 6, 2001. Inspect at the applicable time specified in paragraph 1.E. of Airbus Service Bulletin A320-57-1088, Revision 04, dated August 6, 2001, except as required by paragraphs (i)(1)(i) and (i)(1)(ii) of this AD.

(i) For any airplane that has not been inspected but has exceeded the applicable specified compliance time in paragraph 1.E. of Airbus Service Bulletin A320-57-1088, Revision 04, dated August 6, 2001, as of November 5, 2004 (the effective date of AD 2004-19-11): Inspect within 18 months after November 5, 2004.

(ii) For any airplane that has been inspected before November 5, 2004 (the effective date of AD 2004-19-11): Repeat the inspection within 3,600 flight cycles after the most recent inspection.

(2) Repeat the inspection required by paragraph (i)(1) of this AD at intervals not to exceed 3,600 flight cycles or 6,700 flight hours, whichever occurs first, until the requirements of paragraph (k) of this AD have been done.

**(j) Retained Corrective Action for Inspections Required by Paragraphs (i)(1) and (i)(2) of This AD, With Specific Delegation Approval Language**

This paragraph restates the requirements of paragraph (f) of AD 2004-19-11, with specific delegation approval language. If any crack is found during any inspection required by paragraph (i)(1) or (i)(2) of this AD: Before further flight, repair in accordance with a method approved by either the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate; or the Direction Générale de l'Aviation Civile (or its delegated agent); or the European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval (DOA). Accomplishment of a

repair as required by this paragraph does not constitute terminating action for the repetitive inspections required by paragraph (i)(2) of this AD.

**(k) New Requirement of This AD: Modification of the Inner Rear Spar**

Before exceeding 48,000 flight cycles or 96,000 flight hours, whichever occurs first since first flight of the airplane: Modify all specified fastener holes in the inner rear spar of the wing, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-57-1089, Revision 03, dated February 9, 2001; except, where Airbus Service Bulletin A320-57-1089, Revision 03, dated February 9, 2001, specifies to contact Airbus for certain conditions, before further flight, repair using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or EASA; or Airbus's EASA DOA. Modification of all specified fastener holes in the rear spar of the wing terminates the initial and repetitive inspections required by paragraphs (i)(1) and (i)(2) of this AD. If the modification is done both before the airplane accumulates 12,000 total flight cycles and before the effective date of this AD, the modification also terminates the actions required by paragraphs (g) and (h) of this AD.

**(l) Credit for Previous Actions**

(1) 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 A320-57-1060, Revision 1, dated April 26, 1993. This service information is not incorporated by reference in this AD.

(2) This paragraph provides credit for actions required by paragraph (i) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-57-1088, Revision 02, dated July 29, 1999; or Revision 03, dated February 9, 2001. This service information is not incorporated by reference in this AD.

(3) This paragraph provides credit for actions required by paragraph (k) of this AD, if those actions were performed before the effective date of this AD using Airbus Service Bulletin A320-57-1089, Revision 02, dated November 6, 1998. This service information is not incorporated by reference in this AD.

**(m) 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.

(i) 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.

(ii) AMOCs approved previously in accordance with AD 2004-19-11 are approved as AMOCs for the corresponding provisions of paragraphs (g) through (j) of 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 EASA; or Airbus's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

**(n) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2014-0169, dated July 17, 2014, corrected July 22, 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-2015-5811.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (o)(8) and (o)(9) of this AD.

**(o) 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 June 8, 2016.

(i) Airbus Service Bulletin A320-57-1089, Revision 03, dated February 9, 2001.

(ii) Reserved.

(4) The following service information was approved for IBR on November 5, 2004 (69 FR 58828, October 1, 2004).

(i) Airbus Service Bulletin A320-57-1088, Revision 04, dated August 6, 2001.

(ii) Reserved.

(5) The following service information was approved for IBR on June 30, 2000 (65 FR 34069, May 26, 2000).

(i) Airbus Service Bulletin A320-57-1004, Revision 2, dated June 14, 1993. This service bulletin contains the following list of effective pages: Pages 1, 4, 12, 14, 17 through 20, 22, 23, 28, 29, Revision 2, dated June 14, 1993; page 15, Revision 1, dated September 24, 1992; and pages 2, 3, 5 through 11, 13, 16, 21, 24 through 27, 30, Original Issue, dated July 9, 1991.

(ii) Airbus Service Bulletin A320-57-1060, Revision 2, dated December 16, 1994.

(6) The following service information was approved for IBR on February 14, 1994 (59 FR 1903, January 13, 1994).

(i) Airbus Service Bulletin A320-57-1060, dated December 8, 1992.

(ii) Reserved.

(7) The following service information was approved for IBR on June 11, 1993 (58 FR 27923, May 12, 1993).

(i) Airbus Service Bulletin A320-57-1004, Revision 1, dated September 24, 1992. This service bulletin contains the following list of effective pages: Pages 1, 4, 12, 14 through 15, 17 through 18, 20, Revision 1, dated September 24, 1992; and pages 2 through 3, 5 through 11, 13, 16, 19, 21 through 30, Original Issue, dated July 9, 1991.

(ii) Reserved.

(8) 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>.

(9) 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.

(10) 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 April 8, 2016.  
Michael Kaszycki,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.