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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-9052; Product Identifier 2016-NM-080-AD; Amendment 39-18983; AD 2017-16-06]

RIN 2120-AA64

Airworthiness Directives; Airbus Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Airbus Model A300 series airplanes; Model A300 B4-600, B4-600R, and F4-600R series airplanes, and Model A300 C4-605R Variant F airplanes (collectively called Model A300-600 series airplanes); and Model A310 series airplanes. This AD was prompted by reports of failure of an aft hinge bolt assembly in the nose landing gear (NLG) aft doors. This AD requires replacement of the aft hinge bolt assembly in the left and right NLG aft doors, with new aft hinge bolt assemblies. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective September 22, 2017.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of September 22, 2017.

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; Internet <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 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-2016-9052.

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-2016-9052; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD,

the regulatory evaluation, any comments received, and other information. The street address for the Docket 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 Section, Transport Standards Branch, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-2125; fax 425-227-1149.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus Model A300 series airplanes; Model A300 B4-600, B4-600R, and F4-600R series airplanes, and Model A300 C4-605R Variant F airplanes (collectively called Model A300-600 series airplanes); and Model A310 series airplanes. The NPRM published in the Federal Register on August 30, 2016 (81 FR 59546) (“the NPRM”). The NPRM was prompted by reports of failure of an aft hinge bolt assembly in the NLG aft doors. The NPRM proposed to require replacement of the aft hinge bolt assembly in the left and right NLG aft doors, with new aft hinge bolt assemblies. We are issuing this AD to prevent failure of an aft hinge bolt assembly in an NLG aft door while the airplane is in flight, which could lead to an in-flight loss of an NLG aft door, and damage to the airplane.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2016-0100, dated May 24, 2016 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus Model A300 series airplanes; Model A300 B4-600, B4-600R, and F4-600R series airplanes, and Model A300 C4-605R Variant F airplanes (collectively called Model A300-600 series airplanes); and Model A310 series airplanes. The MCAI states:

An occurrence has been reported of failure of a nose landing gear (NLG) door aft hinge bolt assembly, Part Number (P/N) A53612600000. The result of laboratory investigations revealed that the aft hinge bolt rupture was initiated by fatigue crack development in the under head radius of the bolt, due to the lack of radius roll over and in combination with a non-optimised design.

This condition, if not detected and corrected, could lead to in-flight loss of an aft NLG door, possibly resulting in damage to the aeroplane and injury to persons on the ground.

Prompted by these findings, Airbus developed a new design aft hinge bolt assembly P/N A53612713000, introduced as Airbus modification (mod) 13741, to replace the existing bolt P/N A53612600000. Since the introduction of that mod, additional stress calculations demonstrated that the new bolt assembly, P/N A53612713000, cannot sustain fatigue loads up to the design Limit of Validity (LOV) of the affected aeroplanes.

To address this potential unsafe condition, Airbus issued Service Bulletin (SB) A300-53-0397, SB A310-53-2144 and SB A300-53-6186, to provide instructions for the repetitive replacement of the affected post-mod 13741 P/N A53612713000 aft hinge bolts.

For the reasons described above, this [EASA] AD requires the replacement of all P/N A53612600000 aft hinge bolt assemblies, installed on the left hand (LH) and right hand (RH) NLG aft doors, with post-mod 13741 P/N A53612713000 aft hinge bolt assemblies, and, subsequently, the implementation of a life limit for those new bolt assemblies.

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-2016-9052.

Comments

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

Request To Withdraw the NPRM

FedEx stated it does not agree that the proposed hinge bolt replacement is necessary, asserting that the severity of a failed condition does not equate to an unsafe condition on the airplane. FedEx explained that in the last 22 years of flight operations, it has not had a departure of the NLG door, nor has it seen any cracking of the aft hinge bolt.

From this statement, we infer that FedEx requested we withdraw the NPRM. We disagree with this request. Airbus has records of multiple instances of hinge bolt failures. Failure of an aft hinge bolt assembly in an NLG aft door while the airplane is in flight could lead to an in-flight loss of an NLG aft door, and damage to the airplane. We have not changed this AD in this regard.

Request To Allow Option for Repetitive Inspections

FedEx requested that a repetitive non-destructive test (NDT) technique be allowed as an option to replacing the affected bolts. FedEx stated that a routine NDT inspection would be best suited for this condition and that the affected bolts should only be replaced as an on-condition action. Further, FedEx stated that the proposed requirement to replace all affected bolts will be a financial burden on operators. FedEx also pointed out that the two bolts required for each airplane are \$2,300, and these bolts will be required to be replaced every 10,000 flight cycles (approximately every 10 years). FedEx further requested that the FAA petition the EASA to revise the Airbus service information to permit the repetitive inspection as an option to the required bolt replacement.

We disagree with the commenter's request. The intent of this AD is to regularly replace the affected hinge bolt with a new one. The bolt loading and fatigue spectrum is complex, and the manufacturer is not able to substantiate a fatigue life to support a repeat inspection program. Therefore, we have made no changes to this AD in this regard. However, under the provisions of paragraph (k)(1) of this AD, we will consider requests for approval of an alternative method of compliance (AMOC) if sufficient data are submitted to substantiate that the change would provide an acceptable level of safety.

Request To Remove the Requirement To Replace Aft Hinge Bolts

United Parcel Service (UPS) requested that we revise the proposed AD to remove the requirement to replace aft hinge bolts. UPS contended that the more appropriate method for implementation of the repetitive 10,000-flight-cycle replacement of the hinge bolt assembly would be through a maintenance program revision, or incorporation into the Safe Life Airworthiness Limitation Items (SL ALI)–Part 1. Therefore, UPS recommended that we delete the proposed hinge bolt replacement, and instead coordinate with EASA to revise the SL ALI to include the hinge bolt assembly.

We disagree with the commenter's request. Only parts that are identified as a safe life part are incorporated into the SL ALI. The specified hinge bolt does not meet the Airbus Airworthiness Limitations Section (ALS) Part 1 criteria for a safe life part. The hinge bolt does not have fatigue testing or demonstrated fatigue life analysis, which is required for safe life parts. We have not changed this AD in this regard.

Request To Combine Certain Service Information

UPS requested that, if its request to revise the proposed AD to remove the hinge assembly replacement is unacceptable to the FAA, we revise paragraph (h)(3) of this proposed AD to require removal and installation of a new bolt using only Airbus Service Bulletin A300-53-6182 and not list Airbus Service Bulletin A300-53-6186. UPS explained that the final result of the proposed AD is the replacement of the bolt in every case; however, Airbus Service Bulletin A300-53-6186 specifies doing an inspection of the bolt part number in addition to the replacement and is an added burden to the operator given the location of the identifying mark and the difficulty accessing that mark.

We disagree with the commenter's request because paragraphs (g) and (h) of this AD and the corresponding service information are necessary to distinguish between two different actions with different compliance times:

- Paragraph (g) of this AD and corresponding service information for the introduction of the bolt's new design.
- Paragraph (h) of this AD and corresponding service bulletin for regular bolt replacement, which includes an inspection for verification if the proper bolt part number was installed.

While it might be difficult for operators to identify the part number of the bolt when it is installed on the aircraft, the bolt is scheduled to be removed so it should not be difficult to verify that the correct part was installed. We have not changed this AD in this regard.

Request To Update Illustrated Parts Catalog (IPC) To Show the Post-Modification Part Number

UPS requested that the FAA coordinate with EASA and Airbus to ensure that the IPC is updated to show only the post-modification part number prior to the AD being issued. UPS was concerned that an outdated IPC creates opportunities for installation of the original, non-compliant bolt assembly.

We infer that UPS was also requesting that we delay publication of the final rule pending revision of the IPC. We disagree with this request. Airbus has informed the FAA that the IPC is scheduled to be revised. However, we do not consider that delaying this action until after the release of the manufacturer's revised IPC is warranted, since sufficient information currently exists in this AD and the required service information to address the identified unsafe condition. We have not changed this AD in this regard.

Clarification of Corrective Action

We have clarified the corrective actions in the introductory text of paragraph (h) of this AD by referring to paragraph (k)(2) 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 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 the following Airbus service information.

- Airbus Service Bulletin A300-53-0396, dated November 25, 2015.
- Airbus Service Bulletin A300-53-6182, dated November 17, 2015.
- Airbus Service Bulletin A310-53-2142, dated November 17, 2015.

This service information describes procedures for replacement of the aft hinge bolt assemblies in the left and right NLG aft doors, with new aft hinge bolt assemblies. These documents are distinct since they apply to different airplane models and configurations.

We also reviewed the following Airbus service information.

- Airbus Service Bulletin A300-53-0397, dated January 18, 2016.
- Airbus Service Bulletin A300-53-6186, dated January 18, 2016.
- Airbus Service Bulletin A310-53-2144, dated January 18, 2016.

This service information describes procedures for replacement of the aft hinge bolt assemblies in the left and right NLG aft doors, with new aft hinge bolt assemblies. The replacement includes an inspection to verify if the proper bolt part number was installed and repair if the proper bolt part number was not installed. These documents are distinct since they apply to different airplane models and configurations.

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 157 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement	9 work-hours × \$85 per hour = \$765	\$2,000	\$2,765	\$434,105

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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this

transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

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 adding the following new airworthiness directive (AD):



2017-16-06 Airbus: Amendment 39-18983; Docket No. FAA-2016-9052; Product Identifier 2016-NM-080-AD.

(a) Effective Date

This AD is effective September 22, 2017.

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus airplanes identified in paragraphs (c)(1) through (c)(6) of this AD, certificated in any category, all manufacturer serial numbers.

- (1) Model A300 B2-1A, B2-1C, B2K-3C, B2-203, B4-2C, B4-103, and B4-203 airplanes.
- (2) Model A300 B4-601, B4-603, B4-620, and B4-622 airplanes.
- (3) Model A300 B4-605R and B4-622R airplanes.
- (4) Model A300 F4-605R and F4-622R airplanes.
- (5) Model A300 C4-605R Variant F airplanes.
- (6) Model A310-203, -204, -221, -222, -304, -322, -324, and -325 airplanes.

(d) Subject

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

(e) Reason

This AD was prompted by reports of failure of an aft hinge bolt assembly in the nose landing gear (NLG) aft doors. We are issuing this AD to prevent failure of an aft hinge bolt assembly in an NLG aft door while the airplane is in flight, which could lead to an in-flight loss of an NLG aft door, and damage to the airplane.

(f) Compliance

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

(g) Replacement of Aft Hinge Bolt Assemblies Having Part Number (P/N) A53612600000

Before the accumulation of 10,000 total flight cycles since first flight of the airplane, or within 2,000 flight cycles after the effective date of this AD, whichever occurs later: Replace each aft hinge bolt assembly having P/N A53612600000 on the left and right NLG aft doors, with a new hinge bolt assembly having P/N A53612713000, in accordance with the Accomplishment Instructions of the applicable service information identified in paragraph (g)(1), (g)(2), or (g)(3) of this AD.

- (1) Airbus Service Bulletin A300-53-0396, dated November 25, 2015.
- (2) Airbus Service Bulletin A310-53-2142, dated November 17, 2015.
- (3) Airbus Service Bulletin A300-53-6182, dated November 17, 2015.

(h) Replacement of Aft Hinge Bolt Assemblies Having P/N A53612713000

Within 10,000 flight cycles after modification of an airplane as required by paragraph (g) of this AD: Replace each aft hinge bolt assembly having P/N A53612713000 on the left and right NLG aft doors, with a new aft hinge bolt assembly having P/N A53612713000 on the left and right NLG aft doors, in accordance with the Accomplishment Instructions of the applicable service information specified in paragraph (h)(1), (h)(2), or (h)(3) of this AD, except where the service information specified in paragraph (h)(1), (h)(2), or (h)(3) of this AD specifies to contact Airbus for instructions, before further flight repair using the procedure in paragraph (k)(2) of this AD. Repeat the replacement thereafter at intervals not to exceed 10,000 flight cycles.

- (1) Airbus Service Bulletin A300-53-0397, dated January 18, 2016.
- (2) Airbus Service Bulletin A310-53-2144, dated January 18, 2016.
- (3) Airbus Service Bulletin A300-53-6186, dated January 18, 2016.

(i) Parts Installation Prohibition (P/N A53612600000)

After modification of an airplane NLG aft door as required by paragraph (g) of this AD, do not install an aft hinge bolt assembly having P/N A53612600000 on any NLG aft door of that airplane.

(j) Parts Installation Limitation (P/N A53612713000)

After removal of an aft hinge bolt assembly having P/N A53612713000 from an airplane NLG aft door, as required by paragraph (h) of this AD, do not install an aft hinge bolt assembly having that part number on that airplane unless it is a new aft hinge bolt assembly.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Section, Transport Standards Branch, 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 Section, send it to the attention of the person identified in paragraph (l)(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: 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 Section, Transport Standards Branch, 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.

(3) Required for Compliance (RC): 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.

(l) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2016-0100, dated May 24, 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-2016-9052.

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

(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.

(i) Airbus Service Bulletin A300-53-0396, dated November 25, 2015.

(ii) Airbus Service Bulletin A300-53-0397, dated January 18, 2016.

(iii) Airbus Service Bulletin A300-53-6182, dated November 17, 2015.

(iv) Airbus Service Bulletin A300-53-6186, dated January 18, 2016.

(v) Airbus Service Bulletin A310-53-2142, dated November 17, 2015.

(vi) Airbus Service Bulletin A310-53-2144, dated January 18, 2016.

(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>.

(4) You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) 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 July 26, 2017.

Jeffrey E. Duven,
Director, System Oversight Division,
Aircraft Certification Service.