[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-8184; Directorate Identifier 2016-NM-036-AD; Amendment 39-18843; AD 2017-07-05]

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; and 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). This AD was prompted by reports of cracks in main landing gear (MLG) leg components. This AD requires detailed visual inspections of these MLG leg components and replacement of the MLG leg if cracked components are found. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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 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-2016-8184.

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-2016-8184; 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 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 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; and 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). The NPRM was prompted by reports of cracks in MLG leg components. The NPRM proposed to require repetitive detailed visual inspections of certain MLG leg components for cracks, and replacing the MLG leg if necessary. We are issuing this AD to detect and correct cracking of certain components in the MLG leg, which could result in a MLG collapse, and consequent damage to the airplane and injury to the airplane occupants.

The NPRM published in the Federal Register on August 5, 2016 (81 FR 51818) ("the NPRM").

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2016-0058, dated March 21, 2016 (referred to after this as "the MCAI"), to correct an unsafe condition for all Airbus Model A300 series airplanes; and 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). The MCAI states:

> Two cases were reported of finding a cracked main landing gear (MLG) hinge arm/barrel pin, one was discovered in service during a maintenance task and the other one was identified during MLG overhaul.

> This condition, if not detected and corrected, could lead to MLG collapse, resulting in damage to the aeroplane and potential injury to occupants.
>
> To address this potential unsafe condition, and awaiting a final fix establishment, Airbus issued Alert Operators Transmission (AOT) 32W008-16 to provide instructions for detailed visual inspections (DET) to detect through cracks.
>
> For the reasons described above, this [EASA] AD requires repetitive DET of the MLG hinge arm/barrel pin and, depending on findings, replacement of the affected MLG leg.

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-2016-8184.

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.

Requests to Permit On-wing Inspection/Pin Replacement

FedEx asked whether the airframe manufacturer and/or MLG manufacturer have explored the possibility of inspecting the affected MLG and replacing a cracked MLG hinge arm/barrel pin without removing the MLG leg, as specified by Airbus Alert Operators Transmission (AOT) A32W008-16, dated February 25, 2016, including Appendices 1 through 4. FedEx stated that an on-wing inspection of the MLG leg would be effective in determining if further structural damage has occurred.

United Parcel Service (UPS) requested that we revise the NPRM to allow on-wing replacement of a cracked pin with part number C66441-(x) instead of replacing the MLG

leg. UPS stated that it has reviewed the Airbus A300 Aircraft Maintenance Manual (AMM) and noted that the AMM indicates that the pin can be replaced while the gear is installed on the airplane.

We do not agree that an on-wing inspection of the MLG would be effective in finding further structural damage. When a hinge arm/barrel pin is cracked, damage to other MLG components cannot be excluded. This damage cannot be detected by on-wing inspections. Airbus currently does not have an approved method for on-wing inspections to detect all possible damage to the MLG components. For these reasons, Airbus AOT A32W008-16, dated February 25, 2016, including Appendices 1 through 4, specifies removing the MLG for further inspections for damage.

We also do not agree that an on-wing replacement of the pin in the MLG leg would be an adequate corrective action. As previously explained, when a hinge arm/barrel pin is cracked, other MLG component damage cannot be excluded. On-wing replacement of the pin would not correct any other MLG component damage that might be present.

Under the provisions of paragraph (j)(1) of this AD, we will consider requests for approval of an alternative on-wing inspection or replacement method if sufficient data are submitted to substantiate that the method would provide an acceptable level of safety. We have not changed this AD in this regard.

Requests to Withdraw the NPRM or Increase the Interval between Inspections

UPS and FedEx requested that the 100 flight cycle inspection interval be extended.

FedEx commented that, although it recognizes and appreciates the airplane manufacturer's safety concerns about discovering a cracked MLG hinge arm/barrel pin before complete failure, it would like to see the analysis that resulted in determination of an inspection interval of 100 flight cycles to prevent in-service pin failures. FedEx asserted that a 100 flight cycle interval may be unnecessarily conservative based on the pre-discovery history of cracked pins in the MLG leg of the airplane, which has had two cases of cracked MLG hinge arm/barrel pins.

UPS requested that the FAA either withdraw the NPRM or change the repetitive inspection interval from 100 flight cycles to 1,000 flight cycles. UPS stated that the detailed visual inspection at intervals of 100 flight cycles for the internal diameter of each affected MLG hinge arm/barrel pin specified by paragraph (g) of the proposed AD is too restrictive and not supported by data. UPS stated that it believes the cracking is associated with a specific operator's maintenance practices rather than a design of the landing gear or pin. UPS stated that the AMM and landing gear overhaul manual have defined inspection procedures that have been used to properly maintain the landing gear without any major findings for the past 30 years. UPS noted that its experience for the past 16 years has not shown any findings. UPS provides the following reasons for increasing the interval between inspections.

- The basis for issuance of the MCAI is findings of two cracked pins. The first finding was discovered during gear overhaul after the landing gear completed its gear overhaul life (8 years or 12,000 cycles). The second finding occurred after the unit accumulated more than 3,500 flight cycles since overhaul and was also subjected to a

hard landing. Both pins had accumulated more than 25,000 flight cycles and went to repeat overhauls before failure. This indicates that the crack finding is associated with a specific operator maintenance practice rather than an inherent design problem of the landing gear or pin.

- Airbus Message 80187097/003, dated July 22, 2016, states that Airbus is working with EASA to reduce the burden to operators.

- UPS has operated 52 Model A300 airplanes since introduction of the model in the year 2000 with no findings. UPS's fleet leader airplane has accumulated more than 21,000 flight cycles with no similar finding. UPS has also reviewed all overhaul records since the introduction of Model A300 airplanes and did not find any cracked pins.

- UPS has accomplished the inspection specified in Airbus AOT A32W008-16, dated February 25, 2016, including Appendices 1 through 4, every 100 flight cycles since February 2016. The 260 inspections accomplished on 52 airplanes did not show any findings.

We do not agree to withdraw the NPRM or to increase the repetitive interval between detailed visual inspections on the MLG leg. While the MCAI cites two reports of cracked pins, Airbus has reports from the past six years of 45 pins with damage on the outer diameter. Based on the current reports and ongoing investigation, EASA is not able to support an increased inspection interval. Therefore, we have determined that the inspection interval recommended by the manufacturer and required by EASA is appropriate based on the available data. However, in the future, the data collected from the reporting requirement of paragraph (i) of this AD may provide the necessary

information to justify an increase in the inspection interval. Additionally, if Airbus develops an alternative method of compliance that reduces the burden on operators, we will consider requests for its approval if sufficient data is submitted to substantiate that the method would provide an acceptable level of safety. We have not changed this AD in this regard.

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 Airbus AOT A32W008-16, dated February 25, 2016, including Appendices 1 through 4. This service information describes procedures for a detailed visual inspection of the internal diameter of each affected MLG hinge arm/barrel pin and replacement of the MLG leg with a serviceable unit. 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 128 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
Detailed visual inspection	1 work-hour X $85 per hour = $85 per inspection cycle	0	$85 per inspection cycle	$10,880 per inspection cycle
Reporting	1 work-hour X $85 per hour	0	$85	$10,880

We estimate the following costs to do any necessary replacement that would be required based on the results of the required inspection. We have no way of determining the number of aircraft that might need this replacement.

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Remove and replace MLG Leg	20 work-hours X $85 per hour = $1,700	$3,400,000	$3,401,700

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this AD is 2120-0056. The paperwork cost associated with this AD has been detailed in the Costs of Compliance

section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at 800 Independence Ave., SW, Washington, DC 20591, ATTN: Information Collection Clearance Officer, AES-200.

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 adding the following new airworthiness directive (AD):

2017-07-05 Airbus: Amendment 39-18843; Docket No. FAA-2016-8184; Directorate Identifier 2016-NM-036-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Airbus airplanes identified in paragraphs (c)(1) through (c)(5) 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.

(d) Subject

Air Transport Association (ATA) of America Code 32, Landing Gear.

(e) Reason

This AD was prompted by reports of cracks in main landing gear (MLG) leg components. We are issuing this AD to detect and correct cracking of certain components in the MLG leg, which could result in a MLG collapse, and consequent damage to the airplane and injury to the airplane occupants.

(f) Compliance

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

(g) Repetitive Detailed Visual Inspections

Within the compliance time specified in paragraphs (g)(1) and (g)(2) of this AD, whichever occurs later, and thereafter at intervals not to exceed 100 flight cycles: Accomplish a detailed visual inspection of the internal diameter of each affected MLG hinge arm/barrel pin, in accordance with the instructions of Airbus Alert Operators Transmission (AOT) A32W008-16, dated February 25, 2016, including Appendices 1 through 4. The affected MLG hinge arm/barrel pins are those with part number C66441-(x) and part number C65543-(x), where the x represents a variable number.

(1) Within 30 months since the pin's first flight on an airplane, or since the pin's first flight on an airplane after overhaul, as applicable.

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

(h) Corrective Action for Cracked Pins

If any cracked pin is found during any inspection required by paragraph (g) of this AD, before further flight, replace the MLG leg with a serviceable unit, in accordance with the instructions of Airbus AOT A32W008-16, dated February 25, 2016, including Appendices 1 through 4. Replacement of a MLG leg does not constitute terminating action for the repetitive inspections required by paragraph (g) of this AD.

(i) Reporting Requirement

At the applicable time specified in paragraph (i)(1) or (i)(2) of this AD, report the results of the inspections required by paragraph (g) of this AD to Airbus, in accordance

with the instructions of Airbus AOT A32W008-16, dated February 25, 2016, including Appendices 1 through 4.

(1) If the inspection was done on or after the effective date of this AD: Submit the report within 30 days after the inspection.

(2) If the inspection was done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(j) 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: 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.

(3) Reporting Requirements: A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

(k) Related Information

Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2016-0058, dated March 21, 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-2016-8184.

(l) 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 Alert Operators Transmission (AOT) A32W008-16, dated February 25, 2016, including Appendices 1 through 4. Appendices 1 through 4 of this AOT do not contain the document date.

(ii) Reserved.

(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 Airplane Directorate, 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 March 22, 2017.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.
[FR Doc. 2017-06359 Filed: 3/31/2017 8:45 am; Publication Date: 4/3/2017]