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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-1166; Directorate Identifier 2009-NM-107-AD; Amendment 39-16255; AD 2010-07-10]

RIN 2120-AA64

Airworthiness Directives; Airbus Model A300 B2-1C, B2K-3C, B2-203, B4-2C, B4-103, and B4-203 Airplanes

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

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

One operator reported loss of both pitch trims following autopilot disengagement after take off. Subsequent shop findings revealed severe damage to the power gears. Mal-phasing between the hydraulic motors was suspected to have induced excessive loads into the gear train, leading to collapse of one bearing on a shaft of the main gear, causing severe tooth damage. The combination of tooth damage and gear tilting caused the disconnection of two of the three hydraulic motors, resulting in jamming of the THSA [trimmable horizontal stabilizer actuator] gearbox and consequent loss of THSA control.

This condition, if not detected and corrected, could lead to further cases of mal-phasing of the hydraulic motors of the THSA, causing degradation of the power gears and potentially resulting in reduced control of the aeroplane.

* * * * *

We are issuing this AD to require actions to correct the unsafe condition on these products.

DATES: This AD becomes effective May 7, 2010.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of May 7, 2010.

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Dan Rodina, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 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 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on December 11, 2009 (74 FR 65699). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

One operator reported loss of both pitch trims following autopilot disengagement after take off. Subsequent shop findings revealed severe damage to the power gears. Mal-phasing between the hydraulic motors was suspected to have induced excessive loads into the gear train, leading to collapse of one bearing on a shaft of the main gear, causing severe tooth damage. The combination of tooth damage and gear tilting caused the disconnection of two of the three hydraulic motors, resulting in jamming of the THSA [trimmable horizontal stabilizer actuator] gearbox and consequent loss of THSA control.

This condition, if not detected and corrected, could lead to further cases of mal-phasing of the hydraulic motors of the THSA, causing degradation of the power gears and potentially resulting in reduced control of the aeroplane.

For the reasons described above, this AD requires repetitive checks [on-airplane phasing inspections and magnetic plug inspections for metal particles on the drain plug using detailed inspection methods] of the THSA and corrective actions [replacement of the THSA with a serviceable unit], depending on findings.

You may obtain further information by examining the MCAI in the AD docket.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comment received from the Air Line Pilots Association, International (ALPA). ALPA supports the NPRM.

Conclusion

We reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD as proposed.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to

ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow our FAA policies. Any such differences are highlighted in a NOTE within the AD.

Explanation of Change to Costs of Compliance

Since issuance of the NPRM, we have increased the labor rate used in the Costs of Compliance from \$80 per work-hour to \$85 per work-hour. The Costs of Compliance information, below, reflects this increase in the specified hourly labor rate.

Costs of Compliance

We estimate that this AD will affect 12 products of U.S. registry. We also estimate that it will take about 5 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$5,100, or \$425 per product.

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 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); and
3. 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM, the regulatory evaluation, any comments received, and

other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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 AD:



2010-07-10 Airbus: Amendment 39-16255. Docket No. FAA-2009-1166; Directorate Identifier 2009-NM-107-AD.

Effective Date

- (a) This airworthiness directive (AD) becomes effective May 7, 2010.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to Airbus Model A300 B2-1C, B2K-3C, B2-203, B4-2C, B4-103, and B4-203 airplanes, certificated in any category, all serial numbers.

Subject

- (d) Air Transport Association (ATA) of America Code 27: Flight Controls.

Reason

- (e) The mandatory continuing airworthiness information (MCAI) states:

One operator reported loss of both pitch trims following autopilot disengagement after take off. Subsequent shop findings revealed severe damage to the power gears. Mal-phasing between the hydraulic motors was suspected to have induced excessive loads into the gear train, leading to collapse of one bearing on a shaft of the main gear, causing severe tooth damage. The combination of tooth damage and gear tilting caused the disconnection of two of the three hydraulic motors, resulting in jamming of the THSA [Trimmable Horizontal Stabilizer Actuator] gearbox and consequent loss of THSA control.

This condition, if not detected and corrected, could lead to further cases of mal-phasing of the hydraulic motors of the THSA, causing degradation of the power gears and potentially resulting in reduced control of the aeroplane.

For the reasons described above, this AD requires repetitive checks [on-airplane phasing inspections and magnetic plug inspections for metal particles on the drain plug using detailed inspection methods] of the THSA and corrective actions [replacement of the THSA with a serviceable unit], depending on findings.

Actions and Compliance

- (f) Unless already done, do the following actions.

(1) Within 4,000 flight hours after the last THSA overhaul or within 250 flight hours after the effective date of this AD, whichever occurs later: Perform an on-airplane phasing inspection of the THSA, and a magnetic plug inspection for metal particles on the drain plug of the THSA, using detailed inspection methods, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A300-27-0201, dated March 9, 2009.

(i) If the THSA passes the phasing inspection, but the magnetic plug inspection reveals metal particles that are equal to or less than 1.5 mm (0.059 in.) x 0.5 mm (0.0196 in.), and the depth of the particle layer does not exceed 1 mm (0.0393 in.), repeat the inspections thereafter at intervals not to exceed 2,500 flight hours in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A300-27-0201, dated March 9, 2009.

(ii) If the THSA passes the phasing inspection, but the magnetic plug inspection reveals metal particles with dimensions greater than 1.5 mm (0.059 in.) x 0.5 mm (0.0196 in.), or a layer of particles with a depth greater than 1 mm (0.0393 in.) is found, before further flight, replace the THSA with a serviceable unit, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A300-27-0201, dated March 9, 2009.

(iii) If the THSA fails the phasing inspection and the magnetic plug inspection reveals metal particles that are equal to or less than 1.5 mm (0.059 in.) x 0.5 mm (0.0196 in.), and the depth of the particle layer does not exceed 1 mm (0.0393 in.), within 500 flight hours after the inspection, replace the THSA with a serviceable unit, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A300-27-0201, dated March 9, 2009.

(iv) If the THSA fails the phasing inspection and the magnetic plug inspection reveals metal particles with dimensions greater than 1.5 mm (0.059 in.) x 0.5 mm (0.0196 in.), or a layer of particles with a depth greater than 1 mm (0.0393 in.) is found, before further flight, replace the THSA with a serviceable unit, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A300-27-0201, dated March 9, 2009.

Note 1: For the purposes of this AD, a detailed inspection is: "An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as a mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required."

Note 2: A "serviceable" THSA is one that has a correct hydraulic motor phasing and no particles or few particles with maximum dimensions of 1.5 mm (0.059 in.) x 0.5 mm (0.0196 in.) and a layer of particles with a maximum depth of 1 mm (0.0393 in.) found on the magnetic plug.

(2) Within 2,500 flight hours after replacing any THSA, perform a phasing inspection of the THSA, and a magnetic plug inspection for metal particles on the drain plug of the THSA, as specified in paragraph (f)(1) of this AD. Replacing the THSA, as required by paragraphs (f)(1)(ii), (f)(1)(iii), and (f)(1)(iv) of this AD, as applicable, does not constitute terminating action for the repetitive inspections as required by paragraph (f)(1)(i) of this AD.

(3) As of the effective date of this AD, do not install a replacement THSA on any airplane, unless it has been inspected in accordance with the requirements of paragraphs (f)(1)(i) through (f)(1)(iv), as applicable, of this AD.

(4) Within 3 weeks after removal of a THSA unit from an airplane, send it to the THSA manufacturer, Goodrich Actuation Systems, Stafford Road Fordhouses, Wolverhampton, West Midlands WV10 7EH, England.

(5) Submit a report of the findings (both positive and negative) of the inspections required by paragraph (f)(1) of this AD to the Manager, Airbus Customer Service Directorate, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex France; telephone +33 5 61 93 33 33; telex AIRBU 530526F; fax +33 5 61 93 42 51; at the applicable time specified in paragraph (f)(5)(i) or (f)(5)(ii) of

this AD. The report must include the inspection results (including no findings), and replacement or actions to be done.

(i) For any inspection done on or after the effective date of this AD: Submit the report within 30 days after the inspection.

(ii) For any inspection done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

FAA AD Differences

Note 3: This AD differs from the MCAI and/or service information as follows: No differences.

Other FAA AD Provisions

(g) 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. Send information to ATTN: Dan Rodina, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-2125; fax (425) 227-1149. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

Related Information

(h) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2009-0111, dated May 13, 2009; and Airbus Mandatory Service Bulletin A300-27-0201, dated March 9, 2009; for related information.

Material Incorporated by Reference

(i) You must use Airbus Mandatory Service Bulletin A300-27-0201, including Appendices 1, 2, and 3, dated March 9, 2009, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Airbus SAS–EAW (Airworthiness Office), 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; e-mail: account.airworth-eas@airbus.com; Internet <http://www.airbus.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(4) You may also review copies of the 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/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on March 25, 2010.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.