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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-3993; Directorate Identifier 2015-NM-065-AD; Amendment 39-18592; AD 2016-15-01]

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, 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 partial loss of no-back brake (NBB) efficiency on the trimmable horizontal stabilizer actuator (THSA). This AD requires an inspection to determine THSA part numbers, serial numbers, and flight cycles on certain THSAs; and repetitive replacement of certain THSAs. We are issuing this AD to prevent loss of THSA NBB efficiency, which, in conjunction with the inability of the power gear to keep the ball screw in its last commanded position, could lead to an uncommanded movement of the horizontal stabilizer, possibly resulting in loss of control of the airplane.

DATES: This AD is effective August 26, 2016.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of August 26, 2016.

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-2016-3993.

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-2016-3993; 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; Model A300 B4-600, B4-600R, 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 March 7, 2016 (81 FR 11690) ("the NPRM"). The NPRM was prompted by reports of partial loss of NBB efficiency on the THSA. The NPRM proposed to require an inspection to determine THSA part numbers, serial numbers, and flight cycles on certain THSAs; and repetitive replacement for certain THSAs. We are issuing this AD to prevent loss of THSA NBB efficiency, which, in conjunction with the inability of the power gear to keep the ball screw in its last commanded position, could lead to an uncommanded movement of the horizontal stabilizer, possibly resulting in loss of control of 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 2015-0081, dated May 7, 2015 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition on all Airbus Model A300 series airplanes; Model A300 B4-600, B4-600R, 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:

During endurance qualification tests on a Trimmable Horizontal Stabilizer Actuator (THSA) concerning another aeroplane type, a partial loss of the no-back brake (NBB) efficiency was experienced. Investigation results concluded that this partial loss of braking efficiency in some specific aerodynamic load conditions was due to polishing and auto-contamination of the NBB carbon friction disks.

Due to design similarity on the A300-600, A300-600ST and A310 fleet, the same tests were initiated by the THSA manufacturer on certain type THSA, sampled from the field. Subject tests confirmed that THSA Part Number (P/N) 47142 series, as installed on the A300-600, A300-600ST and A310 fleet, are also affected by this partial loss of NBB efficiency.

This condition, if not detected and corrected, and in conjunction with the power gear not able to keep the ball screw in its last commanded position, could potentially lead to an uncommanded movement of the Horizontal Stabilizer, possibly resulting in loss of control of the aeroplane.

For the reasons described above, this [EASA] AD requires the removal from service of each affected THSA, with the intent of in-shop NBB carbon disk replacement.

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-2016-3993.

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.

Support for the NPRM

The Airline Pilots Association International stated that it fully supports the intent of the NPRM.

Requests To Revise Compliance Date

Airbus, FedEx Express, and United Parcel Service requested that we revise the compliance date in paragraph (j)(3) of the proposed AD from February 1, 2018, to February 1, 2019. The commenters stated that this revision would match the MCAI.

We agree with the commenters' request. This was a typographical error. Our intent was to match the MCAI. We have revised paragraph (j)(3) of this AD accordingly.

Request To Allow Maintenance Records Review

FedEx Express requested that we allow a review of the operator's maintenance records to determine the part number and serial number of the THSA specified in paragraph (h)(1) of the proposed AD. FedEx Express stated that this review would accomplish the same intent as a physical inspection of the THSA.

We agree with the commenter's request. We have revised paragraph (h)(1) of this AD to allow doing a review of airplane maintenance records in lieu of the THSA inspection if the part number and serial number of the THSA can be conclusively determined from that review.

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.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related Service Information Under 1 CFR Part 51

Airbus has issued Airbus Service Bulletin A300-27-6070, dated February 17, 2015; and Airbus Service Bulletin A310-27-2106, dated February 17, 2015. This service information describes procedures for inspection and replacement of the THSA.

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 152 airplanes of U.S. registry.

We also estimate that it would take about 27 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 \$590,000 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$90,028,840, or \$592,295 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 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):



2016-15-01 Airbus: Amendment 39-18592. Docket No. FAA-2016-3993; Directorate Identifier 2015-NM-065-AD.

(a) Effective Date

This AD is effective August 26, 2016.

(b) Affected ADs

None.

(c) Applicability

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

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

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight controls.

(e) Reason

This AD was prompted by reports of partial loss of no-back brake (NBB) efficiency on the trimmable horizontal stabilizer actuator (THSA). We are issuing this AD to prevent loss of THSA NBB efficiency, which, in conjunction with the inability of the power gear to keep the ball screw in its last commanded position, could lead to an uncommanded movement of the horizontal stabilizer, possibly resulting in loss of control of the airplane.

(f) Compliance

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

(g) Affected THSAs

THSAs affected by the requirements of this AD have part numbers (P/Ns) 47142-403, 47142-413, 47142-414, and 47142-423.

Note 1 to paragraph (g) of this AD: FAA AD 2011-15-08, Amendment 39-16755 (76 FR 42029, July 18, 2011), requires installation of three secondary retention plates for the gimbal bearings on the

THSA upper primary attachment, which involved a THSA part number change from the -300 series to the -400 series.

Note 2 to paragraph (g) of this AD: The life limits specified in Part 4 of the airworthiness limitations section are still relevant for the affected THSA. This AD addresses a replacement limit for the NBB disks installed on the THSA, not the life limit for the THSA itself.

(h) Inspection for Affected THSAs, Flight Cycles, and THSA Replacement

Before each date and before exceeding the corresponding THSA flight-cycle limits specified in paragraphs (j)(1), (j)(2), and (j)(3) of this AD, do the actions specified in paragraphs (h)(1) and (h)(2) of this AD; and before exceeding the flight-cycle limit corresponding to each date as specified in paragraphs (j)(1), (j)(2), and (j)(3) of this AD, do the actions specified in paragraph (i) of this AD.

(1) Do an inspection of the THSA to determine the part number and serial number. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number and serial number of the THSA can be conclusively determined from that review.

(2) Do an inspection of the airplane maintenance records to determine the flight cycles accumulated on each affected THSA since first installation on an airplane, or since last NBB replacement, whichever is later. If no maintenance records conclusively identifying the last NBB disk replacement are available, the flight cycles accumulated since first installation of the THSA on an airplane apply.

(i) THSA Replacement

By each date specified in paragraphs (j)(1), (j)(2), and (j)(3) of this AD, for those affected THSAs having reached or exceeded the corresponding number of flight cycles specified in paragraphs (j)(1), (j)(2), and (j)(3) of this AD, replace the THSA with a serviceable unit, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A300-27-6070, dated February 17, 2015; or Airbus Service Bulletin A310-27-2106, dated February 17, 2015, as applicable.

(j) Compliance Dates and THSA Flight-Cycle Limits

Paragraphs (j)(1), (j)(2), and (j)(3) of this AD specify compliance dates and THSA flight-cycle limits for accomplishing the actions required by paragraphs (h) and (i) of this AD.

(1) As of 30 days after the effective date of this AD: The affected THSA flight-cycle limit is 30,000 flight cycles since first installation of the THSA on an airplane, or since last NBB replacement, whichever is later.

(2) As of February 1, 2017: The affected THSA flight-cycle limit is 20,000 flight cycles since first installation of the THSA on an airplane, or since last NBB replacement, whichever is later.

(3) As of February 1, 2019: The affected THSA flight-cycle limit is 14,600 flight cycles since first installation of the THSA on an airplane, or since last NBB replacement, whichever is later.

(k) Serviceable THSA Definition

For the purpose of this AD, a serviceable THSA is a unit identified in paragraph (k)(1) or (k)(2) of this AD.

(1) A THSA identified in paragraph (g) of this AD that, as of each date specified in paragraphs (j)(1), (j)(2), and (j)(3) of this AD, has not exceeded the flight-cycle limits specified in paragraphs (j)(1), (j)(2), and (j)(3) of this AD since first installation of the THSA on an airplane, or since the last NBB disk replacement, whichever is later.

(2) A THSA with a different part number (e.g., a THSA that is not identified in paragraph (g) of this AD) that is not affected by the requirements of this AD.

(l) THSA Replacements

As of each date and before exceeding the flight-cycle limit corresponding to each date specified in paragraphs (j)(1), (j)(2), and (j)(3) of this AD: Replace each affected THSA with a serviceable unit, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A300-27-6070, dated February 17, 2015; or Airbus Service Bulletin A310-27-2106, dated February 17, 2015.

(m) Parts Installation Limitation

Before each date specified in paragraphs (j)(1), (j)(2), and (j)(3) of this AD, an operator may install an affected THSA on an airplane, provided that the unit has not exceeded the corresponding number of flight cycles specified in paragraphs (j)(1), (j)(2), and (j)(3) of this AD, since first installation on an airplane, or since last NBB replacement, whichever is later.

(n) 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 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) 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.

(o) Related Information

Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA AD 2015-0081, dated May 7, 2015, 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-2016-3993.

(p) 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 A300-27-6070, dated February 17, 2015.

(ii) Airbus Service Bulletin A310-27-2106, dated February 17, 2015.

(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 July 11, 2016.

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