



[4910-13-P]

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2014-0006; Directorate Identifier 2013-NM-147-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all Airbus Model A330-200 Freighter, A330-200, A330-300, A340-200, and A340-300 series airplanes. This proposed AD was prompted by the results of endurance qualification tests on the trimmable horizontal stabilizer actuator (THSA), which revealed a partial loss of the no-back brake (NBB) efficiency in specific load conditions. This proposed AD would require inspecting certain THSAs to determine the number of total flight cycles the THSA has accumulated, and replacing the THSA if necessary. We are proposing this AD to detect and correct premature wear of the carbon friction disks on the NBB of the THSA, which could lead to reduced braking efficiency in certain load conditions and, in conjunction with the inability of the power gear train to keep the ball screw in its last commanded position, could result in uncommanded movements of the THS and loss of control of the airplane.

**DATES:** We must receive comments on this proposed AD by **[INSERT DATE 45**

**DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].**

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Airbus SAS, Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@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.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; 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 proposed AD, 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.

**FOR FURTHER INFORMATION CONTACT:** Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1138; fax 425-227-1149.

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the **ADDRESSES** section. Include “Docket No. FAA-2014-0006; Directorate Identifier 2013-NM-147-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will

also post a report summarizing each substantive verbal contact we receive about this proposed AD.

## **Discussion**

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2013-0144R1, dated August 27, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

During endurance qualification tests on A380 Trimmable Horizontal Stabilizer Actuator (THSA), a partial loss of the no-back brake (NBB) efficiency was experienced. Due to THSA design similarity on the A330/A340 fleet, a similar partial loss of the NBB efficiency was identified on THSA Part Number (P/N) 47147, installed on A330-300 and A340-200/-300 aeroplanes, and on THSA P/N 47172, installed on A330-200/-300 and A340-200/-300 aeroplanes.

Investigation results concluded that this particular malfunction was due an ageing/endurance issue of the surfaces of the NBB carbon friction disks, leading to a partial loss of braking efficiency in some specific aerodynamic load conditions.

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

To address this potential unsafe condition, EASA issued \* \* \* [an earlier AD] to require replacement of each THSA that has exceeded 16,000 flight cycles (FC) in-service, to be sent in shop for NBB carbon disk replacement.

Since that AD was issued, a need for clarification has been demonstrated, regarding the identification of the THSA “affected” by this requirement.

For this reason, EASA AD 2013-0144 is revised, confirming that the AD only affects those THSA identified by Part Number (P/N) in Airbus Alert Operator Transmission (AOT) A27L005-13. In addition, a note has been added to make clear that the life limits as specified in the current revision of ALS Part 4 are still relevant for the affected THSA, as applicable to aeroplane model and THSA P/N. This AD addresses the life limit for the NBB installed on the THSA, not the life limit for the THSA itself.

A further reduction of the life limit of the NBB, probably down to 12,000 FC, is under evaluation by EASA and further actions are likely to follow for the THSA that have exceeded that limit in service. In that context and to assess the operational status of the THSA of the A330-200/-300 and A340-200/-300 fleet, this AD also requires identification of the THSA, collection of operational data, and reporting the results to Airbus.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2014-0006.

### **Relevant Service Information**

Airbus has issued Alert Operators Transmission (AOT) A27L005-13, dated July 11, 2013. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

### **FAA’s Determination and Requirements of this Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with

the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

### **Costs of Compliance**

We estimate that this proposed AD affects 76 airplanes of U.S. registry.

We also estimate that it would take about 6 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$0 per product. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be \$38,760, or \$510 per product.

In addition, we estimate that any necessary follow-on actions would take about 23 work-hours and require parts costing \$722,556, for a cost of \$724,511 per product. We have no way of determining the number of aircraft that might need this action.

### **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 proposed AD is 2120-0056. The paperwork cost associated with this proposed 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 proposed 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 proposed 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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed regulation:

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.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

**Airbus:** Docket No. FAA-2014-0006; Directorate Identifier 2013-NM-147-AD.

**(a) Comments Due Date**

We must receive comments by **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to the Airbus airplanes identified in paragraphs (c)(1) through (c)(5) of this AD; certificated in any category; all manufacturer serial numbers.

(1) Model A330-201, -202, -203, -223, and -243 airplanes.

(2) Model A330-223F and -243F airplanes.

(3) Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes.

(4) Model A340-211, -212, and -213 airplanes.

(5) Model A340-311, -312, and -313 airplanes.

**(d) Subject**

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

**(e) Reason**

This AD was prompted by the results of endurance qualification tests on the trimmable horizontal stabilizer actuator (THSA), which revealed a partial loss of the no-back brake (NBB) efficiency in specific load conditions. We are issuing this AD to detect and correct premature wear of the carbon friction disks on the NBB of the THSA, which could lead to reduced braking efficiency in certain load conditions and, in conjunction

with the inability of the power gear train to keep the ball screw in its last commanded position, could result in uncommanded movements of the THS and loss of control of the airplane.

**(f) Compliance**

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

**(g) Inspection**

For airplanes having a THSA with a part number specified in Airbus Alert Operators Transmission (AOT) A27L005-13, dated July 11, 2013: Within 30 days after the effective date of this AD, identify each THSA that has accumulated 10,000 total flight cycles or more since the THSA's first installation on an airplane, and report the collected operational life data to Airbus, in accordance with the instruction of Airbus AOT A27L005-13, dated July 11, 2013.

**(h) THSA Replacement**

For airplanes having a THSA with a part number specified in Airbus AOT A27L005-13, dated July 11, 2013: At the applicable time specified in paragraph (h)(1), (h)(2), or (h)(3) of this AD, replace each affected THSA with a serviceable THSA, in accordance with the instructions of Airbus AOT A27L005-13, dated July 11, 2013.

(1) For a THSA that has accumulated 20,000 total flight cycles or more since the THSA's first installation on an airplane, as of the effective date of this AD: Replace the THSA within 12 months or 1,500 flight cycles after the effective date of this AD, whichever occurs first.

(2) For a THSA that has accumulated 16,000 total flight cycles or more, but less than 20,000 total flight cycles since the THSA's first installation on an airplane, as of the effective date of this AD, and that is installed on an Airbus Model A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, or -343 airplane: Replace the THSA within 30 months or 4,000 flight cycles after the effective date of this AD, whichever occurs first.

(3) For a THSA that has accumulated 16,000 total flight cycles or more, but less than 20,000 total flight cycles since the THSA's first installation on an airplane, as of the effective date of this AD, and that is installed on an Airbus Model A340-211, -212, -213, -311, -312, or -313 airplane: Replace the THSA within 30 months or 3,000 flight cycles after the effective date of this AD, whichever occurs first.

**(i) Definition of Serviceable THSA**

Except as required by paragraph (j)(2) of this AD, for the purposes of this AD a serviceable THSA is a THSA:

(1) Having a part number identified in Airbus AOT A27L005-13, dated July 11, 2013, that has accumulated fewer than 20,000 total flight cycles since first installation on an airplane; or

(2) Having a part number that is not identified in Airbus AOT A27L005-13, dated July 11, 2013.

**(j) Parts Installation Limitation and Replacement**

(1) As of 12 months after the effective date of this AD, no person may install on any airplane a THSA with a part number specified in Airbus AOT A27L005-13, dated

July 11, 2013, that has accumulated 20,000 total flight cycles or more since the THSA's first installation on an airplane. For any airplane having a THSA with a part number specified in Airbus AOT A27L005-13, dated July 11, 2013, that has accumulated 20,000 total flight cycles or more since the THSA's first installation on an airplane: As of 12 months after the effective date of this AD, before further flight, replace the affected THSA with a serviceable THSA, in accordance with Airbus AOT A27L005-13, dated July 11, 2013.

(2) As of 30 months after the effective date of this AD, no person may install on any airplane a THSA with a part number specified in Airbus AOT A27L005-13, dated July 11, 2013, that has accumulated 16,000 total flight cycles or more since the THSA's first installation on an airplane. For any airplane having a THSA with a part number specified in Airbus AOT A27L005-13, dated July 11, 2013, that has accumulated 16,000 total flight cycles or more since the THSA's first installation on an airplane: As of 30 months after the effective date of this AD, before further flight, replace the affected THSA with a serviceable THSA, in accordance with Airbus AOT A27L005-13, dated July 11, 2013.

**(k) 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: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1138; fax 425-227-1149. Information may be emailed to: [9-ANM-116-AMOC-REQUESTS@faa.gov](mailto: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) Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they were approved by the State of Design Authority (or its delegated agent, or by the Design Approval Holder with a State of Design Authority's design organization approval). For a repair method to be approved, the repair approval must specifically refer to this AD. You are required to ensure the product is airworthy before it is returned to service.

**(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.

**(l) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) European Aviation Safety Agency Airworthiness Directive 2013-0144R1, dated August 27, 2013, 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 it in Docket No. FAA-2014-0006.

(2) For service information identified in this AD, contact Airbus SAS, Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com); Internet <http://www.airbus.com>. 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. Issued in Renton, Washington, on January 22, 2014.

Jeffrey E. Duven,  
Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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