



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0665; Directorate Identifier 2012-NM-082-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 A330-300 series airplanes and Model A340-200 and -300 series airplanes. This proposed AD was prompted by reports of corrosion found on certain trimmable horizontal stabilizer actuators (THSA), affecting the ballscrew lower splines between the tie bar and the screw-jack. This proposed AD would require repetitive detailed inspections for corrosion of certain THSAs, ballscrew integrity tests if necessary; and replacing any affected THSA with a serviceable or new and improved THSA, if necessary. We are proposing this AD to detect and correct corrosion of the THSAs, which could lead, in the case of ballscrew rupture, to the loss of transmission of THSA torque loads from the ballscrew to the tie-bar, prompting THSA blowback, and possibly resulting in 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 Airbus 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; Internet <http://www.airbus.com>. For Goodrich service information identified in this proposed AD, contact Goodrich Corporation, Actuation Systems, Product Support Department 13, Avenue de L’Eguillette – Saint-Ouen L’Aumone Boite Postale 7186 95056, Cergy Pontoise Cedex, France; fax: 33-1-34326310. You may review copies of the 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 Operations office 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-2013-0665; Directorate Identifier 2012-NM-082-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 2012-0061R1, dated November 30, 2012 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Some Trimmable Horizontal Stabilizer Actuators (THSA), Part Number (P/N) 47147-500, have been found with corrosion, affecting the ballscrew lower splines between the tie bar and the screw-jack.

The results of the technical investigations have identified that the corrosion was caused by a combination of:

- Contact/friction between the tie bar and the inner surface of the ballscrew leading to the removal of Molykote (corrosion protection) at the level of the tie bar splines,
- Humidity ingress initiating surface oxidation starting from areas where Molykote is removed, and
- Water retention in THSA lower part leading to corrosion spread out and to the creation of a brown deposit (iron oxide).

The results of the technical investigations have also concluded that THSA P/N 47147-500 and P/N 47147-700 ballscrews might be affected by this corrosion issue.

THSA P/N 47147-400 ballscrews might be affected as well, but should no longer be in service, and modified into P/N 47147-500, as required by EASA AD 2010-0192 and EASA AD 2010-0193 [and as required by FAA AD 2005-07-04, Amendment 39-14028 (70 FR 16104, March 30, 2005)].

This condition, if not detected and corrected, may lead, in case of ballscrew rupture, to loss of transmission of THSA torque loads from the ballscrew to the tie-bar, prompting THSA blowback, possibly resulting in loss of control of the aeroplane.

To correct this potential unsafe condition, EASA issued AD 2012-0061 to require repetitive [detailed] visual inspections of the ballscrew lower splines of THSA having P/N 47147-500 or P/N 47147-700 to detect corrosion and, depending on findings [ballscrew integrity tests], the accomplishment of applicable corrective actions [replacing the affected THSA with a serviceable or improved THSA].

Since that [EASA] AD [2012-0061] was issued, Airbus published new Service Bulletin (SB) A330-27-3194 or Airbus SB A340-27-4187 (Airbus modification 202802), which allow installation in service of an improved THSA P/N 47172-530.

For the reasons described above, this [EASA] AD [2012-0061R1] is revised to specify that installation of THSA P/N 47172-530 is an alternative (optional) terminating action to the repetitive inspections required by this AD.

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

Relevant Service Information

Airbus has issued the following service information.

- Airbus Mandatory Service Bulletin A330-27-3179, including Appendix 01, dated February 14, 2012.
- Airbus Service Bulletin A330-27-3182, dated February 14, 2012.
- Airbus Service Bulletin A330-27-3194, dated October 8, 2012.
- Airbus Mandatory Service Bulletin A340-27-4175, including Appendix 01, dated February 14, 2012.

- Airbus Service Bulletin A340-27-4178, dated February 14, 2012.
- Airbus Service Bulletin A340-27-4187, dated October 8, 2012.

Goodrich Actuation Systems has issued Service Bulletin 47147-27-18, dated February 17, 2012.

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

Based on the service information, we estimate that this proposed AD would affect about 30 products 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. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$15,300, or \$510 per product.

In addition, we estimate that any necessary follow-on actions would take about 13 work-hours and require parts costing up to \$722,556 for a cost of up to \$723,661 per

product. We have no way of determining the number of products that may need these actions.

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 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.

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

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 AD:

Airbus: Docket No. FAA-2013-0665; Directorate Identifier 2012-NM-082-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 Airbus Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes; and Model A340-211, -212, -213, -311, -312, and -313 airplanes; certificated in any category; all manufacturer serial numbers.

(d) Subject

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

(e) Reason

This AD was prompted by reports of corrosion found on certain trimmable horizontal stabilizer actuators (THSA), affecting the ballscrew lower splines between the tie bar and the screw-jack. We are issuing this AD to detect and correct corrosion of the THSAs, which could lead, in the case of ballscrew rupture, to loss of transmission of THSA torque loads from the ballscrew to the tie-bar, prompting THSA blowback, and possibly resulting in loss of control of the airplane.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Repetitive Inspections

At the applicable time specified in paragraph (g)(1) or (g)(2) of this AD, except as required by paragraphs (h)(1) and (h)(2) of this AD: Do a detailed inspection of the gaps between the screw shaft and tie rod teeth of any THSA having part numbers

(P/N) 47147-500 and 47147-700, to determine if the corrosion condition is Type I, Type II, or Type III, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3179 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes); both dated February 14, 2012; and the Accomplishment Instructions and flowchart following the Accomplishment Instructions of Goodrich Actuation Systems Service Bulletin 47147-27-18, dated February 17, 2012. Repeat the inspection thereafter at intervals not to exceed 24 months until the modification specified in paragraph (k) is done.

(1) For any THSA, which, as of the effective date of this AD, has accumulated less than 156 months since first flight on an airplane as THSA P/N 47147-400 or since its first flight after modification has been done as specified in the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3052 or A340-27-4059: Do the inspection before the accumulation of 156 months but not before the accumulation of 132 months since first flight on an airplane as THSA P/N 47147-400 or since the THSA first flight after its modification was done as specified in the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3052 or A340-27-4059; or within 3 months after the effective date of this AD; whichever occurs later.

(2) For any THSA, which, as of the effective date of this AD, has accumulated 156 months or more since first flight on an airplane as THSA P/N 47147-400 or since the THSA first flight after modification has been done as specified in the Accomplishment

Instructions of Airbus Mandatory Service Bulletin A330-27-3052 or A340-27-4059: Do the inspection within 3 months after the effective date of this AD.

(h) Compliance Time Exceptions

(1) Some THSAs having P/N 47147-500 (and further derivative with P/N 47147-700) were originally THSA P/N 47147-400 and were subsequently modified in service. In this case, the time accumulated by any THSA must be calculated from the first installation on airplanes as THSA P/N 47147-400.

(2) Some THSAs having P/N 47147-500 (and further derivative with P/N 47147-700) were originally THSA P/N 47147-200, -210, -213, -300, -303, or -350 and were subsequently modified in service as specified in the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3052 or A340-27-4059. In this case, the time accumulated by any THSA must be calculated from the first flight on an airplane after the THSA has been modified as specified in the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3052 or A340-27-4059.

(i) Ballscrew Integrity Test and Corrective Actions

If, during any inspection required by paragraph (g) of this AD, it is determined that a THSA has Type II or Type III corrosion, before further flight: Do a ballscrew integrity test, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3179 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes); both dated February 14, 2012.

(1) For THSAs having Type II or Type III corrosion, and the results of the ballscrew integrity test were not correct, as specified in the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3179 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes); both dated February 14, 2012: Before further flight, replace the affected THSA with a new or serviceable THSA, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3179 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes); both dated February 14, 2012.

(2) For THSAs having Type III corrosion, and the results of the ballscrew integrity test are correct, as specified in the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3179 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes); both dated February 14, 2012: Within 10 days after the most recent inspection, replace the THSA with a new or serviceable THSA, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3179 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes); both dated February 14, 2012.

(3) For THSAs having Type II corrosion and the results of the ballscrew integrity test are correct: Within 24 months or 4,400 flight cycles after the most recent inspection,

whichever occurs first, replace the THSA with a new or serviceable THSA, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3179 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes); both dated February 14, 2012.

(j) Replacement of a THSA is not Terminating Action

Replacement of a THSA with a THSA having P/N 47147-500 or 47147-700 does not constitute a terminating action for the repetitive inspections required by paragraph (g) of this AD.

(k) Optional Terminating Modification

(1) Replacing any THSA having P/N 47147-500 with a new improved THSA having P/N 47172-300 (Airbus modification 200238), in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330-27-3182 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4178 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes); both dated February 14, 2012; terminates the repetitive inspections required by paragraph (g) of this AD.

(2) Replacing any THSA having P/N 47147-700 with a new improved THSA having P/N 47172-530 (Airbus modification 202802), in accordance with the Accomplishment Instructions of Airbus Service Bulletin A330-27-3194 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4187 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes); both

dated October 8, 2012; terminates the repetitive inspections required by paragraph (g) of this AD.

(l) Parts Installation Limitation

As of the effective date of this AD, no person may install a THSA, P/N 47147-500 or P/N 47147-700, on any airplane, unless the THSA is classified as Type I (no corrosion), in accordance with the criteria defined in Goodrich Actuation Systems Service Bulletin 47147-27-18, dated February 17, 2012; and thereafter inspected in accordance with the requirements of paragraph (g) of this AD and any applicable actions required by paragraph (i) of this AD are accomplished.

(m) Reporting

Submit a report of the findings (both positive and negative) of the inspection required by paragraph (g) of this AD to Airbus, at the applicable time specified in paragraph (m)(1) or (m)(2) of this AD, using Appendix 01 of Airbus Mandatory Service Bulletins A330-27-3179 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes); both dated February 14, 2012.

(1) If the inspection was done on or after the effective date of this AD: Submit the report within 90 days after the inspection.

(2) If the inspection was done before the effective date of this AD: Submit the report within 90 days after the effective date of this AD.

(n) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, 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. 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 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: 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.

(o) Related Information

(1) Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2012-0061R1, dated November 30, 2012; and the service information identified in paragraphs (o)(1)(i) through (o)(1)(vii) of this AD; for related information.

(i) Airbus Mandatory Service Bulletin A330-27-3179, dated February 14, 2012.

(ii) Airbus Service Bulletin A330-27-3182, dated February 14, 2012.

(iii) Airbus Service Bulletin A330-27-3194, dated October 8, 2012.

(iv) Airbus Mandatory Service Bulletin A340-27-4175, dated February 14, 2012.

(v) Airbus Service Bulletin A340-27-4178, dated February 14, 2012.

(vi) Airbus Service Bulletin A340-27-4187, dated October 8, 2012.

(vii) Goodrich Actuation Systems Service Bulletin 47147-27-18, dated February 17, 2012.

(2) For Airbus 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; Internet <http://www.airbus.com>. For Goodrich

Actuation Systems service information identified in this AD, contact Goodrich Corporation, Actuation Systems, Product Support Department 13, Avenue de L'Eguillette – Saint-Ouen L'Aumone Boite Postale 7186 95056, Cergy Pontoise Cedex, France; fax: 33-1-34326310. You may review copies of the 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. Issued in Renton, Washington, on July 21, 2013.

Stephen P. Boyd,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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