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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0665; Directorate Identifier 2012-NM-082-AD; Amendment 39-17634; AD 2013-22-02]

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 A330-300 series airplanes and Model A340-200 and -300 series airplanes. 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. This AD requires 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 issuing 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: This AD becomes effective December 5, 2013.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of December 5, 2013.

ADDRESSES: You may examine the AD on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2013-0665> 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 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 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 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.

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:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to the specified products. The NPRM published in the Federal Register on August 1, 2013 (78 FR 46543). The NPRM proposed to correct an unsafe condition for the specified products.

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 Mandatory Continuing Airworthiness Information, or "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 examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0665-0002>.

Relevant Service Information

We have received Airbus Mandatory Service Bulletins A330-27-3179 and A340-27-4175, both Revision 01, both dated June 13, 2013; which specify no additional work. We have updated paragraphs (g), (i), and (n) of this final rule to reference this service information. We have also added new paragraph (m) to this final rule to allow credit for the actions specified in paragraphs (g), (i), and (n) of this final rule, if those actions were performed before the effective date of this AD using Airbus Mandatory Service Bulletins A330-27-3179, dated February 14, 2012; or A340-27-4175, dated February 14, 2012. Subsequent paragraphs have been re-designated accordingly.

Comments

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (78 FR 46543, August 1, 2013) or on the determination of the cost to the public.

Conclusion

We reviewed the available data 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 changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 46543, August 1, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 46543, August 1, 2013).

Costs of Compliance

Based on the service information, we estimate that this AD affects about 30 products of U.S. registry. We also estimate that it takes about 6 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 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.

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.

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 MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0665-0002>; 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 AD, the MCAI, 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.

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:



2013-22-02 Airbus: Amendment 39-17634. Docket No. FAA-2013-0665; Directorate Identifier 2012-NM-082-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective December 5, 2013.

(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, Revision 01, dated June 13, 2013 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175, Revision 01, dated June 13, 2013 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes); 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 its first flight on an airplane as THSA P/N 47147-400, or since its first flight after the modification specified in the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3052 or A340-27-4059 has

been done: 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's first flight after the modification specified in the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3052 or A340-27-4059 has been done; 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 its first flight on an airplane as THSA P/N 47147-400, or since its first flight after the modification specified in the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3052 or A340-27-4059 has been done: 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, Revision 01, dated June 13, 2013 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175, Revision 01, dated June 13, 2013 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes).

(1) For THSAs having Type II or Type III corrosion, and on which the results of the ballscrew integrity test were not correct, as specified in the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3179, Revision 01, dated June 13, 2013 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175, Revision 01, dated June 13, 2013 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes): 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, Revision 01, dated June 13, 2013 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175, Revision 01, dated June 13, 2013 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes).

(2) For THSAs having Type III corrosion, and on which the results of the ballscrew integrity test are correct, as specified in the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3179, Revision 01, dated June 13, 2013 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175, Revision 01, dated June 13, 2013 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes): 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, Revision 01, dated June 13, 2013 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175, Revision 01, dated June 13, 2013 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes).

(3) For THSAs having Type II corrosion, and on which 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, Revision 01, dated June 13, 2013 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175, Revision 01, dated June 13, 2013 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes).

(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) Credit for Previous Actions

(1) This paragraph provides credit for the actions specified in paragraphs (g), (i), and (n) of this AD, if those actions were performed before the effective date of this AD using Airbus Mandatory Service Bulletin A330-27-3179, dated February 14, 2012, which is not incorporated by reference in this AD.

(2) This paragraph provides credit for the actions specified in paragraphs (g), (i), and (n) of this AD, if those actions were performed before the effective date of this AD using Airbus Mandatory Service Bulletin A340-27-4175, dated February 14, 2012, which is not incorporated by reference in this AD.

(n) 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 (n)(1) or (n)(2) of this AD, using Appendix 01 of Airbus Mandatory Service Bulletin A330-27-3179, Revision 01, dated June 13, 2013 (for Model A330-301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes); or A340-27-4175, Revision 01, dated June 13, 2013 (for Model A340-211, -212, -213, -311, -312, and -313 airplanes).

(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.

(o) 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. 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.

(p) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2012-0061R1, dated November 30, 2012, for related information. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2013-0665-0002>.

(2) Service information identified in this AD that is not incorporated by reference may be obtained at the addresses specified in paragraphs (q)(3) and (q)(4) of this AD.

(q) 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 Mandatory Service Bulletin A330-27-3179, Including Appendix 01, Revision 01, dated June 13, 2013.

(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, including Appendix 01, Revision 01, dated June 13, 2013.

(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.

(3) 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.

(4) You may review copies of the 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 October 15, 2013.
Jeffrey E. Duven,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.