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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0502; Directorate Identifier 2010-SW-097-AD; Amendment 39-17242; AD 2012-22-06]

RIN 2120-AA64

Airworthiness Directives; Aeronautical Accessories, Inc., High Landing Gear Forward Crosstube Assembly

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for Aeronautical Accessories, Inc. (AAI) high landing gear forward crosstube assemblies (crosstubes) installed on Agusta S.p.A. (Agusta) Model AB412 and AB412EP; and Bell Helicopter Textron, Inc. (Bell) Model 205A, 205A-1, 205B, 212, 412, 412CF, and 412EP helicopters during production or based on a supplemental type certificate (STC). This AD requires counting and recording the total number of landings for the crosstubes, and inspecting the crosstubes and replacing them if a crack or other damage exists. This AD was prompted by two reports from the field of failed crosstubes. The actions are intended to prevent failure of a crosstube, collapse of the landing gear, and subsequent loss of control of the helicopter.

DATES: This AD is effective December 14, 2012.

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of December 14, 2012.

ADDRESSES: For service information identified in this AD, contact Aeronautical Accessories, Inc., P.O. Box 3689, Bristol, TN 37625-3689, telephone (423) 538-5151 or (800) 251-7094, fax (423) 538-8469, or at <http://www.aero-access.com>. You may review a copy of the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth Texas 76137.

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 AD, any incorporated-by-reference service information, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (phone: 800-647-5527) is U.S.

Department of Transportation, Docket Operations Office, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Michael Kohner, Aviation Safety Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, TX 76137; telephone (817) 222-5170; email 7-avs-asw-170@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On May 11, 2012, at 77 FR 27663, the Federal Register published our notice of proposed rulemaking (NPRM), which proposed to amend 14 CFR part 39 to include an AD that would apply to AAI crosstubes installed on Agusta Model AB412 and AB412EP, and Bell Model 205A, 205A-1, 205B, 212, 412, 412CF, and 412EP helicopters during production or based on an STC. That NPRM proposed to require creating a component history card or equivalent record and counting and recording the total number of landings for the crosstubes. It also proposed to require inspecting the crosstubes and replacing them if a crack or other damage exists. The proposed requirements were intended to prevent failure of a crosstube, collapse of the landing gear, and subsequent loss of control of the helicopter.

The NPRM was prompted by two reports from the field of crosstube failures. AAI issued Alert Service Bulletin AA-08055, Revision B, dated August 12, 2009 (ASB) to provide procedures for repetitively inspecting the high forward crosstubes to detect this condition.

Comments

We gave the public the opportunity to participate in developing this AD, but we received no comments on the NPRM (77 FR 27663, May 11, 2012).

FAA's Determination

We have reviewed the relevant information and determined that an unsafe condition exists and is likely to exist or develop on other products of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed.

Related Service Information

We reviewed the AAI ASB, which specifies establishing a takeoff/landing history, recurrent visual and fluorescent penetrant inspections of the crosstubes, and dimensional inspections of the skid gear. We have also reviewed AAI Instructions for Continued Airworthiness (ICA) for Crosstubes, Report No. AA-01136, Revision K, dated February 15, 2012, which contains the information necessary for inspection and maintenance of each crosstube installed on the Agusta and Bell helicopters.

Costs of Compliance

We estimate that this AD will affect 115 helicopters of U.S. Registry and that operators will incur the following costs to comply with this AD:

- Creating a historical record and determining the number of landings will require a half work hour at an average labor rate of \$85 per hour for a cost per helicopter of about \$42 and a cost to the U.S. operator fleet of \$4,830 per inspection cycle.

- Preparing and inspecting the crosstube will require 8.5 work hours at an average labor rate of \$85 per hour for a cost per helicopter of about \$722 and a cost to the U.S. operator fleet of \$83,030 per inspection cycle.
- Performing the dimensional inspection of the skid gear will require 1 work hour at an average labor rate of \$85 per hour for a cost per helicopter of \$85 and a cost to the U.S. operator fleet of \$9,775 per inspection cycle.
- Fluorescent penetrant inspecting the crosstube will require 24 work hours at an average labor rate of \$85 per hour for a cost per helicopter of \$2,040 and a cost to the U.S. operator fleet of \$234,600 per inspection cycle.
- If required, replacing a crosstube with an airworthy crosstube will require 10 work hours at an average labor rate of \$85, required parts will cost \$9,315, for a cost per helicopter of \$10,165.

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

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 DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; 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 an economic evaluation of the estimated costs to comply with this 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.

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):



2012-22-06 Aeronautical Accessories, Inc. (AAI): Amendment 39-17242; Docket No. FAA-2012-0502; Directorate Identifier 2010-SW-097-AD.

(a) Applicability

This AD applies to high landing gear forward crosstube assembly (crosstube), part number (P/N) 212-321-103, installed on Agusta S.p.A. Model AB412 and AB412EP and Bell Helicopter Textron, Inc. Model 205A, 205A-1, 205B, 212, 412, 412CF, and 412EP helicopters, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as failure of the landing gear crosstube, which could result in collapse of the landing gear and subsequent loss of control of the helicopter.

(c) Effective Date

This AD becomes effective December 14, 2012.

(d) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(e) Required Actions

(1) Within 50 hours time-in-service (TIS) after the effective date of this AD:

(i) Create a component history card or equivalent record for the crosstube by following the Accomplishment Instructions, Part A, paragraph 1., of AAI Alert Service Bulletin No. AA-08055, Revision B, dated August 12, 2009 (ASB).

(ii) Determine and record on the component history card or equivalent record the total number of landings for the crosstube. If the landing information is unavailable, estimate the number by multiplying the airframe hours TIS by 10. Continue to count and record the number of landings for the crosstube. For the purposes of this AD, a landing would be counted anytime the helicopter lifts off into the air and then lands again with any further reduction of the collective after the landing gear touches the ground.

(2) Within 50 hours TIS after the effective date of this AD or before reaching a total of 7,500 landings on any crosstube, whichever occurs later:

(i) Prepare the crosstube inspection areas as described in the Accomplishment Instructions, Part B, paragraphs 1. through 5. and Figure 1, of the ASB.

(ii) Using a 10X or higher power magnifying glass and a bright light, visually inspect the prepared areas of the crosstube for a crack. If there is a crack, before further flight, replace the crosstube with an airworthy crosstube.

(iii) If there is no crack, following the inspection, prime and paint the inspection areas by following the Accomplishment Instructions, Part B, paragraphs 7. and 8., of the ASB. If there is any

corrosion or other damage, perform the replacement or repair required in paragraph (e)(5)(iv) of this AD before priming and painting the inspection areas.

(3) Thereafter, at intervals not to exceed 200 landings, clean the crosstube inspection areas by following the Accomplishment Instructions, Part C, paragraph 1., of the ASB. Using a 10X or higher power magnifying glass and a bright light, visually inspect the clear-coated areas of the crosstube for a crack. If there is a crack, before further flight, replace the crosstube with an airworthy crosstube.

(4) Within 30 days after the effective date of this AD or before reaching a total of 10,000 landings on any crosstube, whichever occurs later, and thereafter at intervals not to exceed 2,500 landings or 12 months, whichever occurs first, determine the horizontal deflection of the crosstube from the centerline of the helicopter (BL 0.0) to the outside of the skid tubes by following the Accomplishment Instructions, Part D, paragraphs 1. and 2., of the ASB. If the crosstube measures outside any of the limits depicted in Figure 2 of the ASB, before further flight, replace the crosstube with an airworthy crosstube.

(5) Within 3 months after the effective date of this AD or before reaching a total of 12,500 landings on any crosstube, whichever occurs later, and thereafter at intervals not to exceed 5,000 landings:

(i) Remove and disassemble the landing gear assembly and crosstube to prepare for a fluorescent penetrant inspection (FPI) by following the Accomplishment Instructions, Part E.1, paragraphs 1. through 6., of the ASB.

(ii) Clean and prepare the crosstube by removing the sealant and paint as described in the Accomplishment Instructions, Part E.2, paragraphs 1. through 3. and Figure 3, of the ASB.

(iii) Perform an FPI of the crosstube in the areas depicted in Figure 3 of the ASB for a crack, any corrosion, a nick, scratch, dent, or any other damage by following the Accomplishment Instructions, Part E.3, paragraph 1., of the ASB. If there is a crack, before further flight, replace the crosstube with an airworthy crosstube.

(iv) If there is any corrosion or a nick, scratch, dent, or any other damage, before further flight, repair the crosstube to an airworthy configuration if the damage is within the maximum repair damage limits or replace the crosstube with an airworthy crosstube. Chapter 3.5 Repair, Table 1. and Figure 3 of the AAI Instructions for Continued Airworthiness for Crosstubes, Report No. AA-01136, Revision K, dated February 15, 2012, contains the maximum repair damage limits and repair procedures.

(f) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Rotorcraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Michael Kohner, Aviation Safety Engineer, Rotorcraft Certification Office, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, TX 76137; telephone (817) 222-5170; email 7-avs-asw-170@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

(g) Subject

Joint Aircraft Service Component (JASC) Code: 3213: Main Landing Gear Strut/Axle/Truck.

(h) 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 the AD specifies otherwise.

(i) Aeronautical Accessories Inc. Alert Service Bulletin No. AA-08055, Revision B, dated August 12, 2009.

(ii) Aeronautical Accessories Inc. Instructions for Continued Airworthiness for Crosstubes, Report No. AA-01136, Revision K, dated February 15, 2012.

(3) For service information identified in this AD, contact Aeronautical Accessories, Inc., P.O. Box 3689, Bristol, TN 37625-3689, telephone (423) 538-5151 or (800) 251-7094, fax (423) 538-8469, or at <http://www.aero-access.com>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

(5) You may also view this service information 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 Fort Worth, Texas, on October 24, 2012.

Lance T. Gant,
Acting Directorate Manager, Rotorcraft Directorate,
Aircraft Certification Service.