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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0083; Directorate Identifier 2010-SW-022-AD; Amendment 39-17077; AD 2012-11-13]

RIN 2120-AA64

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

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the Aeronautical Accessories, Inc. (AAI), High Landing Gear Aft Crosstube Assembly (aft crosstube) installed on certain Bell Helicopter Textron, Inc. (Bell) and Agusta S.p.A. (Agusta) model helicopters as an approved Bell part installed during production or based on a Supplemental Type Certificate (STC). This AD requires certain recurring visual, dimensional, and fluorescent penetrant inspections of each aft crosstube, and replacing any cracked crosstube. This AD also requires establishing a life limit and creating a component history card or equivalent record for one of the affected part-numbered aft crosstubes. This AD was prompted by three reports of failed crosstubes because of cracks. 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 July 30, 2012.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of July 30, 2012.

ADDRESSES: For service information identified in this AD, contact Aeronautical Accessories, Inc., P.O. Box 3689, Bristol, Tennessee 37625-3689, telephone (423) 538-5151 or 1-800-251-7094, fax (423) 538-8469 or at <http://www.aero-access.com>. You may also get service information from Bell Helicopter Textron, Inc., P.O. Box 482, Fort Worth, TX 76101, telephone (817) 280-3391, fax (817) 280-6466, or at <http://www.bellcustomer.com/files>. 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: Martin R. Crane, Aviation Safety Engineer, Rotorcraft Directorate, Rotorcraft Certification Office, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222-5170, email martin.r.crane@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On Feb. 3, 2012, at 77 FR 5420, 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 aft crosstube part number (P/N) 412-321-104 and P/N 412-321-304, installed on Agusta Model AB412 and AB412EP and Bell Model 412, 412CF, and 412EP helicopters. The NPRM proposed to require certain recurring visual, dimensional, and fluorescent penetrant inspections of each aft crosstube. If there is a crack, the NPRM proposed to require, before further flight, replacing any cracked aft crosstube with an airworthy aft crosstube. The NPRM also proposed to require establishing a life limit for one of the affected part-numbered aft crosstubes (as the later part-numbered aft crosstube already has limits established) and creating a component history card or equivalent record for aft crosstube part number (P/N) 412-321-304. The proposed requirements were intended to prevent failure of a crosstube, collapse of the landing gear, and subsequent loss of control of the helicopter.

Comments

We gave the public the opportunity to participate in developing this AD, but we did not receive any comments on the NPRM.

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 the same type design and that air safety and the public interest require adopting the AD requirements as proposed except for minor editorial changes. These minor editorial changes are consistent with the intent of the proposals in the NPRM and will not increase the economic burden on any operator nor increase the scope of the AD.

Related Service Information

We have reviewed AAI Alert Service Bulletin (ASB) No. AA-07109, dated April 3, 2008, which specifies recurring inspections and maintenance of each aft crosstube, P/N 412-321-104, installed as an approved part by Bell during production, and P/N 412-321-304, installed under STC SR01052AT, on Bell Model 412, 412EP, and 412CF and Agusta Model AB412 and AB412EP helicopters. This ASB specifies establishing a high aft crosstube, P/N 412-321-304, "takeoff/landing" life limit of 20,000. Also, this ASB specifies that operators should follow helicopter towing instructions to prevent crosstube damage or failure as a result of ground handling or towing.

We have also reviewed Bell ASB No. 412-08-129, dated May 12, 2008, for Bell Model 412 and 412EP helicopters, serial numbers 33001 through 33213, 36001 and subsequent, with an aft crosstube

P/N 412-321-104 installed. Bell issued its ASB "to achieve complete distribution of AA-07109 vendor bulletin to the current affected model distribution list."

Costs of Compliance

We estimate that this AD will affect 115 helicopters of U.S. Registry.

We also estimate that the required actions will take about:

- 1 hour to create a component history card or equivalent record and determine and record the number of accumulated takeoffs and landings for each affected aft crosstube;
- 3 hours to prepare the area for a visual inspection;
- 1/2 hour to do the repetitive visual inspections, assuming 14 repetitive visual inspections per year;
- 1 hour to do a dimensional inspection of the skid gear, assuming 3 inspections per year;
- 24 hours to prepare and fluorescent penetrant inspect the aft crosstube, assuming 2 inspections per year; and
- 10 hours to replace an aft crosstube, if necessary, assuming 3 aft crosstubes are replaced.

The average labor rate is \$85 per work hour. Required parts will cost about \$9,315 per aft crosstube. Based on these figures, we estimate the total cost impact of this AD on U.S. operators to be \$636,545.

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):



2012-11-13 Aeronautical Accessories, Inc.: Amendment 39-17077; Docket No. FAA-2012-0083; Directorate Identifier 2010-SW-022-AD.

(a) Applicability

This AD applies to High Landing Gear Aft Crosstube Assembly (aft crosstube) part number (P/N) 412-321-104 and P/N 412-321-304, installed on Agusta S.p.A. Model AB412 and AB412EP and Bell Helicopter Textron, Inc., Model 412, 412CF, and 412EP helicopters, certificated in any category.

(b) Unsafe Condition

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

(c) Effective Date

This AD becomes effective July 30, 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) establish a life limit of 20,000 takeoffs and landings for each aft crosstube P/N 412-321-304. For the purposes of this AD, a takeoff and landing is defined as the cycle from when the helicopter gets light on the skids (takeoff) unloading the aft crosstube and then settles on the skids again (landing) reloading the aft crosstubes. Either the number of landings or takeoffs may be counted.

(i) Create a component history card or equivalent record.

(ii) Determine and record on the history card or equivalent record the total number of takeoffs and landings for each aft crosstube. If the takeoff and landing information is unavailable, estimate the number by multiplying the airframe hours by 10.

(2) Within the next 450 takeoffs and landings, if an aft crosstube has reached 20,000 or more takeoffs and landings, replace it with an airworthy aft crosstube.

(3) Before reaching 2,500 takeoffs and landings or for an aft crosstube with 2,500 or more takeoffs and landings, within 50 hours TIS or within the next 250 takeoffs and landings, whichever occurs first, prepare the aft crosstube inspection areas as depicted in Figure 1 of Aeronautical Accessories, Inc. (AAI), Alert Service Bulletin No. AA-07109, dated April 3, 2008 (ASB), by following the Accomplishment Instructions, Part B, paragraphs 1 through 4, of the ASB. Using a 10X or higher magnifying glass, inspect the prepared areas of each aft crosstube for a crack. If there is a crack, before further flight, replace the cracked aft crosstube with an airworthy aft crosstube. If there

are no cracks, after completing the aft crosstube inspection, prime and paint the inspection area by following the Accomplishment Instructions, Part B, paragraphs 6 and 7, of the ASB.

(4) Thereafter, at intervals not to exceed 450 takeoffs and landings, clean the inspection area. Using a 10X or higher magnifying glass, inspect the clear-coated area of the aft crosstube for a crack.

(5) If there is a crack, before further flight, replace the cracked aft crosstube with an airworthy aft crosstube.

(6) Within 30 days or before reaching 2,500 takeoffs and landings, whichever occurs later, and thereafter at intervals not to exceed 2,500 takeoffs and landings or 12 months, whichever occurs first, determine the horizontal deflection of each aft 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 through 3, of the ASB. If the measured aft crosstube horizontal deflection depicted in Figure 2 of the ASB is less than 57 inches (1,448 mm) or greater than 59 inches (1,499 mm), replace the aft crosstube with an airworthy aft crosstube.

(7) Within 3 months or on or before reaching 7,500 takeoffs and landings, whichever occurs later, and thereafter at intervals not to exceed 5,000 takeoffs and landings:

(i) Remove the aft crosstube assembly by removing the aft crosstube support beam assembly, P/N 604-030-001, and both aft crosstube clamp assemblies, P/N 604-027-002.

(ii) Remove paint and sealant from the aft crosstube outboard of the upper center support to top of saddles, both sides, as depicted in Figure 3 of the ASB.

(iii) Fluorescent penetrant inspect each aft crosstube outboard of the upper center support as depicted in Figure 3 of the ASB for a crack.

(iv) If there is a crack, before further flight, replace the cracked aft crosstube with an airworthy aft crosstube.

(8) Revise the helicopter Airworthiness Limitations section of the applicable maintenance manuals or the Instructions for Continued Airworthiness (ICA) by establishing a new retirement life of 20,000 takeoff and landings for aft crosstube P/N 412-321-304 by making pen and ink changes or inserting a copy of this AD into the maintenance manual or the ICAs.

(f) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Rotorcraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Martin R. Crane, Aviation Safety Engineer, Rotorcraft Directorate, Rotorcraft Certification Office, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222-5170, email martin.r.crane@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 119, 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) Additional Information

The FAA-accepted AAI Instructions for Continued Airworthiness Report Number AA-01136, and the Bell Helicopter Textron Alert Service Bulletin No. 412-08-129, dated May 12, 2008, which are not incorporated by reference, contain additional information about inspecting the aft crosstube for a crack. For the AAI service information, contact Aeronautical Accessories, Inc., P.O. Box 3689, Bristol, Tennessee 37625-3689, telephone (423) 538-5151 or 1-800-251-7094, fax (423) 538-8469, or at <http://www.aero-access.com>. For the Bell Helicopter Textron service information, contact Bell Helicopter Textron, Inc., P.O. Box 482, Fort Worth, TX 76101, telephone (817) 280-3391, fax (817) 280-6466, or at <http://www.bellcustomer.com/files>.

(h) Subject

Joint Aircraft Service Component (JASC) Code: 32: Landing Gear.

(i) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on July 10, 2012.

(i) Aeronautical Accessories, Inc., Alert Service Bulletin No. AA-07109, dated April 3, 2008.

(4) For this service information, contact Aeronautical Accessories, Inc., P.O. Box 3689, Bristol, Tennessee 37625-3689, telephone (423) 538-5151 or 1-800-251-7094, fax (423) 538-8469, or at <http://www.aero-access.com>.

(5) You may review a copy of this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137 or 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/code_of_federal_regulations/ibr_locations.html.

Issued in Fort Worth, Texas, on May 25, 2012.

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