

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0564; Directorate Identifier 2010-SW-013-AD; Amendment 39-17494; AD 2013-13-06]

RIN 2120-AA64

Airworthiness Directives; Various Restricted Category Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for Arrow Falcon Exporters, Inc. (previously Utah State University); Firefly Aviation Helicopter Services (previously Erickson Air-Crane Co.); California Department of Forestry; Garlick Helicopters, Inc.; Global Helicopter Technology, Inc.; Hagglund Helicopters, LLC (previously Western International Aviation, Inc.); International Helicopters, Inc.; Precision Helicopters, LLC; Robinson Air Crane, Inc.; San Joaquin Helicopters (previously Hawkins and Powers Aviation, Inc.); S.M.&T. Aircraft (previously US Helicopters, Inc., UNC Helicopter, Inc., Southern Aero Corporation, and Wilco Aviation); Smith Helicopters; Southern Helicopter, Inc.; Southwest Florida Aviation International, Inc. (previously Jamie R. Hill and Southwest Florida Aviation); Tamarack Helicopters, Inc. (previously Ranger Helicopter Services, Inc.); US Helicopter, Inc. (previously UNC Helicopter, Inc.); West Coast Fabrication; and Williams Helicopter Corporation (previously Scott Paper Co.) Model HH-1K, TH-1F, TH-1L, UH-1A, UH-1B, UH-1E, UH-1F, UH-1H, UH-1L, and UH-1P Helicopters; and Southwest Florida Aviation Model UH-1B (SW204 and SW204HP) and UH-1H (SW205) Helicopters. This AD requires creating a component history card or equivalent record for each main rotor grip (grip); determining and recording the total hours time-in-service (TIS) for each grip; visually inspecting the upper and lower tangs of the grip for a crack; inspecting the grip buffer pads for delamination and if delamination is present, inspecting the grip surface for corrosion or other damage; inspecting the grip for a crack using ultrasonic (UT) and fluorescent penetrant inspection methods; and establishing a retirement life for certain grips. This AD was prompted by three in-flight failures of grips installed on Bell Helicopter Textron (Bell) Model 212 helicopters, which resulted from cracks originating in the lower main rotor blade bolt lug. The actions are intended to prevent failure of the grip, separation of a main rotor blade, and subsequent loss of control of the helicopter.

DATES: This AD is effective September 10, 2013.

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of September 10, 2013.

ADDRESSES: For service information identified in this AD, 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/>. 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, Texas 76137; telephone (817) 222-5170; email 7-avs-asw-170@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

On July 8, 2010, at 75 FR 39192, 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 Arrow Falcon Exporters, Inc. (previously Utah State University); Firefly Aviation Helicopter Services (previously Erickson Air-Crane Co.); California Department of Forestry; Garlick Helicopters, Inc.; Global Helicopter Technology, Inc.; Hagglund Helicopters, LLC (previously Western International Aviation, Inc.); International Helicopters, Inc.; Precision Helicopters, LLC; Robinson Air Crane, Inc.; San Joaquin Helicopters (previously Hawkins and Powers Aviation, Inc.); S.M.&T. Aircraft (previously US Helicopters, Inc., UNC Helicopter, Inc., Southern Aero Corporation, and Wilco Aviation); Smith Helicopters; Southern Helicopter, Inc.; Southwest Florida Aviation International, Inc. (previously Jamie R. Hill and Southwest Florida Aviation); Tamarack Helicopters, Inc. (previously Ranger Helicopter Services, Inc.); US Helicopter, Inc. (previously UNC Helicopter, Inc.); West Coast Fabrication; and Williams Helicopter Corporation (previously Scott Paper Co.) Model HH-1K, TH-1F, TH-1L, UH-1A, UH-1B, UH-1E, UH-1F, UH-1H, UH-1L, and UH-1P Helicopters; and Southwest Florida Aviation Model UH-1B (SW204 and SW204HP) and UH-1H (SW205) Helicopters with certain grips installed. The NPRM proposed to require creating a component history card or equivalent record for each grip; determining and recording the total hours TIS for each grip; visually inspecting the upper and lower tangs of the grip for a crack; inspecting the grip buffer pads for delamination and if delamination is present, inspecting the grip surface for corrosion or other damage; inspecting the grip for a crack using UT and fluorescent penetrant inspection methods; and establishing a retirement life for certain grips. The NPRM was prompted by reports of three in-flight failures of grips, P/N 204-011-121-009 and 204-011-121-121, installed on Bell Model 212 helicopters. The failures resulted from cracks originating in the lower blade bolt lug. The cracking was attributed to subsurface fatigue, corrosion and mechanical damage. Grips with these same P/Ns are eligible for installation on certain restricted category helicopters. Grips, P/N 204-

044-121-005 and 204-044-121-113, are also affected if they were ever installed on a Model 205B or UH-1N helicopter. The proposed requirements were intended to prevent failure of the grip, separation of a main rotor blade, 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 (75 FR 39192, July 8, 2010).

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 except for we are incorporating the figure by reference instead of including it in our AD and other minor changes to meet current publication requirements. These changes are consistent with the intent of the proposals in the NPRM (75 FR 39192, July 8, 2010) and will not increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

We estimate that this AD will affect 20 helicopters of U.S. registry and that labor costs will average \$85 per work-hour. Based on these estimates, we expect the following costs:

- Creating new component history cards or the equivalent will require two work-hours for a labor cost of \$170 per helicopter, \$3,400 for the U.S. fleet.
- Maintaining records will require five work-hours per year for a labor cost of \$425.
- Conducting 24 visual inspections using a magnifying glass will require 12 work-hours per year for a labor cost of \$1,020.
- 1/2 of a buffer pad inspection: 1.5 hours per year for a labor cost of \$128.
- 1/4 of a fluorescent penetrant inspection: .5 work hour per year for a labor cost of \$43.
- 4 UT inspections: 4 work hours per year for a labor cost of \$340.
- Removing and replacing a grip set will require 20 work hours per year. A set of grips will cost \$37,590, for total cost of \$39,290 per helicopter.

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):



2013-13-06 Various Restricted Category Helicopters: Amendment 39-17494; Docket No. FAA-2010-0564; Directorate Identifier 2010-SW-013-AD.

(a) Applicability

This AD applies to Arrow Falcon Exporters, Inc. (previously Utah State University); Firefly Aviation Helicopter Services (previously Erickson Air-Crane Co.); California Department of Forestry; Garlick Helicopters, Inc.; Global Helicopter Technology, Inc.; Hagglund Helicopters, LLC (previously Western International Aviation, Inc.); International Helicopters, Inc.; Precision Helicopters, LLC; Robinson Air Crane, Inc.; San Joaquin Helicopters (previously Hawkins and Powers Aviation, Inc.); S.M.&T. Aircraft (previously US Helicopters, Inc., UNC Helicopter, Inc., Southern Aero Corporation, and Wilco Aviation); Smith Helicopters; Southern Helicopter, Inc.; Southwest Florida Aviation International, Inc. (previously Jamie R. Hill and Southwest Florida Aviation); Tamarack Helicopters, Inc. (previously Ranger Helicopter Services, Inc.); US Helicopter, Inc. (previously UNC Helicopter, Inc.); West Coast Fabrication; and Williams Helicopter Corporation (previously Scott Paper Co.) Model HH-1K, TH-1F, TH-1L, UH-1A, UH-1B, UH-1E, UH-1F, UH-1H, UH-1L, and UH-1P Helicopters; and Southwest Florida Aviation Model UH-1B (SW204 and SW204HP) and UH-1H (SW205) Helicopters with main rotor grip (grip) part number (P/N) 204-011-121-009, 204-011-121-121, or ASI-4011-121-9, installed, or with grip P/N 204-011-121-005 or 204-011-121-113, if the grip was ever installed on a Model 205B or a Model UH-1N helicopter, or P/N 204-011-121-117, installed, if the grip was ever installed on a Model 205B helicopter, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as a crack in the lower main rotor blade bolt lug. This condition could result in failure of a grip, separation of a main rotor blade, and subsequent loss of control of the helicopter.

(c) Effective Date

This AD becomes effective September 10, 2013.

(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 10 hours time-in-service (TIS), create a component history card or equivalent record and determine and record the total hours TIS for each grip. If the total hours TIS cannot be determined from the helicopter records, assume and record 50 hours TIS for each month for which the hours cannot be determined with the grip installed on any helicopter. Continue to count and

record the hours TIS and begin to count and record the number of times the helicopter engine(s) are started (engine start/stop cycles).

(2) Within 10 hours TIS, and then at intervals not to exceed 25 hours TIS, without removing the main rotor blades:

(i) Clean the exposed surfaces of the upper and lower tangs of each grip with denatured alcohol and wipe dry.

(ii) Using a 10X or higher magnifying glass, visually inspect the exposed surfaces of the upper and lower tangs of each grip for a crack. Pay particular attention to the lower surface of each lower grip tang from the main rotor blade bolt-bushing flange to the leading and trailing edge of each grip tang as depicted in Figure 5-7, Inspection of Main Rotor Hub Grip (1200 Hours), Revision 9, dated August 8, 2008, of Chapter 5, Inspections and Component Overhaul Schedule, Revision 11, dated April 30, 2010, of Bell Helicopter Textron, Inc. (BHTI), BHT-212-MM-1, Revision 13, dated September 16, 2010.

(iii) At the intervals shown in Table 1 to Paragraph (e) of this AD, ultrasonic (UT) inspect each grip for a crack in accordance with the BHTI Nondestructive Inspection Procedure, Log No. 00-340, Revision E, dated April 9, 2002. The UT inspection of the grip must be performed by a Nondestructive Testing (NDT) UT Level I Special, Level II, or Level III inspector who is qualified under the guidelines established by MIL-STD-410E, ATA Specification 105, AIA-NAS-410, or an FAA-accepted equivalent for qualification standards of NDT Inspection/Evaluation Personnel.

Table 1 to Paragraph (e)

UT inspect grip, P/N	Within 30 days, for a grip with the following or more hours TIS:	Thereafter, at intervals not to exceed the following number of hours TIS or the engine start/stop cycles, whichever occurs first:	
		Hours TIS	Engine start/stop cycles
204-011-121-009 or ASI-4011-121-9	4,000	400	1,600
204-011-121-121	500	150	600
204-011-121-005 or -113, if the grip was EVER installed on a Model 205B or Model UH-1N helicopter	4,000	400	1,600
204-011-121-117, if the grip was EVER installed on a Model 205B helicopter	500	150	600

(3) At intervals not to exceed 1,200 hours TIS or 24 months, whichever occurs first:

(i) Remove each main rotor blade, and

(ii) Inspect each grip buffer pad on the inner surfaces of each grip tang for delamination as depicted in Figure 5-7, Inspection of Main Rotor Hub Grip (1200 Hours), Revision 9, dated August 8, 2008, of Chapter 5, Inspections and Component Overhaul Schedule, Revision 11, dated April 30, 2010, of Bell Helicopter Textron, Inc., BHT-212-MM-1, Revision 13, dated September 16, 2010. If there is any delamination, remove the buffer pad and inspect the grip surface for corrosion or other damage.

(4) Within 2,400 hours TIS or at the next overhaul of the main rotor hub, whichever occurs first, and then at intervals not to exceed 2,400 hours TIS:

(i) Remove each main rotor blade.

- (ii) Remove each grip buffer pad (if installed) from the inner surfaces of each grip tang.
- (iii) Visually inspect the grip surfaces for corrosion or other damage.
- (iv) Fluorescent-penetrant inspect (FPI) the grip for a crack, paying particular attention to the upper and lower grip tangs. When inspecting a grip, P/N 204-011-121-005, 204-011-121-009, or 204-011-121-113, or ASI-4011-121-9, pay particular attention to the leading and trailing edges of the grip barrel.
- (5) Before further flight:
 - (i) Replace any cracked grip with an airworthy grip.
 - (ii) Replace any grip with any corrosion or other damage with an airworthy grip, or repair the grip if the corrosion or other damage is within the maximum repair limitations.
 - (iii) Remove any grip, P/N 204-011-121-009 or ASI-4011-121-9, that has been in service for 15,000 or more hours TIS.
 - (iv) Remove any grip, P/N 204-011-121-121, that has been in service for 25,000 or more hours TIS.
- (6) Revise the Airworthiness Limitations section of the applicable maintenance manual or the Instructions for Continued Airworthiness (ICA) by establishing a new retirement life of 15,000 hours TIS for grip, P/N 204-011-121-009 or ASI-4011-121-9, and 25,000 hours TIS for grip, P/N 204-011-121-121, by marking pen and ink changes or inserting a copy of this AD into the maintenance manual or ICA.
- (7) Record a 15,000 hour TIS life limit for each grip, P/N 204-011-121-009 or ASI-4011-121-9, and a 25,000 hour life limit for each grip, P/N 204-011-121-121, on the applicable component history card or equivalent record.

(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, Texas 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) Additional Information

BHTI Alert Service Bulletin (ASB) 212-94-92, Revision A, dated March 13, 1995; BHTI Operations Safety Notice (OSN) 204-85-6, OSN 205-85-9, and OSN 212-85-13, all dated November 14, 1985 and co-published as one document; BHTI ASB 205B-02-39, Revision B, dated November 22, 2002; and BHTI ASB 212-02-116, Revision A, dated October 30, 2002, which are not incorporated by reference, contain additional information about the subject of this AD.

(h) Subject

Joint Aircraft Service Component (JASC) Code: 6220, Main rotor head.

(i) 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) Bell Helicopter Textron, Inc. Nondestructive Inspection Procedure, Log No. 00-340, Revision E, dated April 9, 2002.

(ii) Figure 5-7, Inspection of Main Rotor Hub Grip (1200 Hours), Revision 9, dated August 8, 2008, of Chapter 5, Inspections and Component Overhaul Schedule, Revision 11, dated April 30, 2010, of Bell Helicopter Textron, Inc., BHT-212-MM-1, Revision 13, dated September 16, 2010.

(3) For BHTI service information identified in this AD, 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/>.

(4) You may review a copy of 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 review a copy of 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 June 18, 2013.

Kim Smith,
Directorate Manager, Rotorcraft Directorate,
Aircraft Certification Service.