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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-SW-08-AD; Amendment 39-12711; AD 2002-06-52]

RIN 2120-AA64

Airworthiness Directives; Bell Helicopter Textron Canada Model 407 Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This document publishes in the Federal Register an amendment adopting Airworthiness Directive (AD) 2002-06-52, which was sent previously to all known U.S. owners and operators of Bell Helicopter Textron Canada (BHTC) Model 407 helicopters by individual letters. This AD requires a one-time replacement of certain bearings and, before further flight, adding a limitation and caution to the rotorcraft flight manual (RFM) and at specified intervals, inspecting, replacing, and lubricating certain oil cooler blower bearings. This AD is prompted by several occurrences of failure of an oil cooler blower bearing. The actions specified by this AD are intended to prevent failure of an oil cooler blower bearing, loss of tail rotor drive, and a subsequent forced landing.

DATES: Effective May 2, 2002, to all persons except those persons to whom it was made immediately effective by Emergency AD 2002-06-52, issued on March 15, 2002, which contained the requirements of this amendment.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of May 2, 2002.

Comments for inclusion in the Rules Docket must be received on or before June 17, 2002.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Office of the Regional Counsel, Southwest Region, Attention: Rules Docket No. 2002-SW-08-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. You may also send comments electronically to the Rules Docket at the following address: 9-asw-adcomments@faa.gov.

The applicable service information may be obtained from Bell Helicopter Textron Canada, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4, telephone (450) 437-2862 or (800) 363-8023, fax (450) 433-0272. This information may be examined at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Paul Madej, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Rotorcraft Standards Staff, Fort Worth, Texas 76193-0110, telephone (817) 222-5125, fax (817) 222-5961.

SUPPLEMENTARY INFORMATION: On February 10, 2000, the FAA issued Final Rule AD 2000-02-12 (65 FR 8032, February 17, 2000), to require inspecting each oil cooler blower bearing (bearing) for roughness and replacing any rough bearing before further flight. That AD was prompted by reports of failure of the bearing. Since the issuance of that AD, continued bearing failures and identifications of effects of engine exhaust gas ingestion have been reported. On March 15, 2002, the FAA issued superseding Emergency AD 2002-06-52 for BHTC Model 407 helicopters. That emergency AD requires a one-time replacement of certain bearings within 100 hours time-in-service, and before further flight, adding a limitation and caution to the RFM and at specified intervals, inspecting and, if necessary, replacing certain bearings and lubricating certain bearings. That action was prompted by several occurrences of failure of an oil cooler blower bearing. Particular tailwind conditions during flight can result in engine exhaust gas ingestion by the oil cooler blower and deterioration of the bearing grease. This condition, if not corrected, could result in bearing failure, loss of tail rotor drive, and a subsequent forced landing.

The FAA has reviewed Bell Helicopter Textron Alert Service Bulletin (ASB) Nos. 407-01-44, Revision A, dated October 25, 2001; 407-01-47, dated November 9, 2001; and 407-02-49, dated January 7, 2002. ASB 407-01-44, Revision A, dated October 25, 2001, specifies replacing specific oil cooler blower bearings and clarifies and expands the bearing lubrication procedure and schedule. ASB 407-01-47, dated November 9, 2001, updates the inspection and lubrication procedures and schedule for specified bearings at all oil cooler blower and tail rotor driveshaft locations. ASB 407-02-49, dated January 7, 2002, introduces a new limitation and a new caution for tailwind operations in the RFM and maintenance actions for exceeding the limitations.

Transport Canada, which is the airworthiness authority for Canada, notified the FAA that an unsafe condition may exist on this helicopter model. Transport Canada advises that testing indicates premature failure of an oil cooler blower bearing can occur, under certain conditions, due to ingesting exhaust gases into the aft fairing inlet resulting in elevated temperatures. Also, Transport Canada advises that research indicates that over-greasing the bearing can result in elevated bearing temperatures and failure of a bearing. Transport Canada classified the service bulletins as mandatory and issued AD No. CF-2002-18, dated March 4, 2002, to ensure the continued airworthiness of these helicopters.

This helicopter model is manufactured in Canada and is type certificated for operation in the United States under the provisions of 14 CFR 21.29 and the applicable bilateral agreement. Pursuant to the applicable bilateral agreement, Transport Canada has kept the FAA informed of the situation described above. The FAA has examined the findings of Transport Canada, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

This unsafe condition is likely to exist or develop on other BHTC Model 407 helicopters of the same type design registered in the United States. Therefore, the FAA issued Emergency AD 2002-06-52 to prevent failure of an oil cooler blower bearing, loss of tail rotor drive, and a subsequent forced landing. The AD requires:

- Before further flight, adding the tailwind limitation and caution contained in Temporary Revision 9 (the temporary revision is attached to ASB 407-02-49, dated January 7, 2002) to the RFM.
- At specified intervals, inspecting the oil cooler blower bearings; and if a bearing is rough, a seal is torn, the expelled grease has turned black, or metal particles are visible in the expelled grease, replacing the affected bearing before further flight.
- At a specified time-in-service, replacing certain bearings.
- At specified intervals, lubricating the bearings.

The actions must be accomplished in accordance with the ASBs described previously. The short compliance time involved is required because the previously described critical unsafe condition can adversely affect the structural integrity and controllability of the helicopter. Therefore, the actions previously described are required at the specified time intervals, and this AD must be issued immediately.

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment thereon were impracticable and contrary to the public interest, and good cause existed to make the AD effective immediately by individual letters issued on March 15, 2002, to all known U.S. owners and operators of BHTC Model 407 helicopters. These conditions still exist, and the AD is hereby published in the Federal Register as an amendment to 14 CFR 39.13 to make it effective to all persons.

The FAA estimates that 281 helicopters of U.S. registry will be affected by this AD. It will take approximately 1 work hour for each RFM revision; 2 work hours per helicopter for the initial inspection; 0.5 hour for each repetitive inspection; 0.5 hour to lubricate the oil cooler blower bearing; and 4 work hours per helicopter to replace the oil cooler blower bearing. Required parts will cost approximately \$1,926 per helicopter. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$996,426, assuming 20 repetitive inspections and 20 bearing lubrications on each helicopter and bearing replacement on all the helicopters in the fleet.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their mailed comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 2002-SW-08-AD." The postcard will be date stamped and returned to the commenter.

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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.

Sec. 39.13 [Amended]

2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC



U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-06-52 Bell Helicopter Textron Canada: Amendment 39-12711. Docket No. 2002-SW-08-AD. Supersedes AD 2000-02-12, Docket No. 99-SW-79-AD, Amendment 39-11579.

Applicability: Model 407 helicopters, with oil cooler blower bearing, part number (P/N) 406-040-339-ALL, 407-340-339-101 or -103, installed, certificated in any category.

Note 1: This AD applies to each helicopter identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For helicopters that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent oil cooler blower bearing failure, loss of tail rotor drive, and a subsequent forced landing, accomplish the following:

(a) Before further flight, insert the tailwind limitation and caution, contained in Temporary Revision (TR) 9, dated January 15, 2002, into the Bell Model 407 Rotorcraft Flight Manual (RFM), dated February 9, 1996.

Note 2: TR 9 is attached to Bell Helicopter Textron (BHT) Alert Service Bulletin (ASB) 407-02-49, dated January 7, 2002.

(b) Within 10 hours time-in-service (TIS), inspect the forward and aft oil cooler blower bearings by hand-rotating the driveshaft with the oil cooler driveshaft connected. If a bearing is rough, a seal is torn, the expelled grease has turned black, or metal particles are visible in the expelled grease, replace the affected bearing before further flight.

(c) At intervals not to exceed 25 hours TIS, for oil cooler blower bearings, P/N 406-040-339-ALL and 407-340-339-103:

(1) Inspect the bearings by hand-rotating the driveshaft in accordance with the Accomplishment Instructions, Part I, paragraph 2, of BHT ASB 407-01-47, dated November 9, 2001 (ASB 407-01-47). If a bearing is rough, a seal is torn, the expelled grease has turned black, or metal particles are visible in the expelled grease, replace the affected bearing before further flight.

(2) Lubricate the bearings in accordance with the Accomplishment Instructions, Part II, paragraph 2, of ASB 407-01-47.

(d) For oil cooler blower bearings, P/N 407-340-339-101:

(1) At intervals not to exceed 25 hours TIS, inspect the bearings by hand-rotating the driveshaft in accordance with the Accomplishment Instructions, Part II, paragraph 1, of BHT ASB 407-01-44, Revision A, dated October 25, 2001 (ASB 407-01-44, Revision A). If a bearing is rough, a seal is torn, the expelled grease has turned black, or metal particles are visible in the expelled grease, replace the affected bearing before further flight.

(2) At intervals not to exceed 100 hours TIS, lubricate the bearings in accordance with the Accomplishment Instructions, Part III, paragraphs 1 and 2, of ASB 407-01-44, Revision A.

(e) Within 100 hours TIS, replace the forward and aft oil cooler blower bearings, P/N 406-040-339-ALL and 407-340-339-103, if installed, with airworthy bearings, P/N 407-340-339-101. Continue to inspect and lubricate the bearings in accordance with paragraph (d) of this AD.

(f) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Regulations Group, Rotorcraft Directorate, FAA. Operators shall submit their requests through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, Regulations Group.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Regulations Group.

(g) Special flight permits will not be issued.

(h) The inspections and lubrication of the oil cooler blower bearings shall be done in accordance with the Accomplishment Instructions, Part I, paragraph 2, of Bell Helicopter Textron Alert Service Bulletin 407-01-47, dated November 9, 2001 and Part II, paragraph 1, of Bell Helicopter Textron Alert Service Bulletin 407-01-44, Revision A, dated October 25, 2001. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Bell Helicopter Textron Canada, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4, telephone (450) 437-2862 or (800) 363-8023, fax (450) 433-0272. Copies may be inspected at the FAA, Office of the Regional Counsel, Southwest Region, Attention: Rules Docket No. 2002-SW-08-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(i) This amendment becomes effective on May 2, 2002, to all persons except those persons to whom it was made immediately effective by Emergency AD 2002-06-52, issued March 15, 2002, which contained the requirements of this amendment.

Note 4: The subject of this AD is addressed in Transport Canada AD CF-2002-18, dated March 4, 2002.

Issued in Fort Worth, Texas, on April 4, 2002.

David A. Downey,

Manager, Rotorcraft Directorate, Aircraft Certification Service.

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