DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2010–1228; Directorate Identifier 2009–SW–12–AD]

RIN 2120–AA64

Airworthiness Directives; Eurocopter France Model AS350B, B1, B2, B3, BA, and EC130 B4 Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for the specified Eurocopter France (ECF) helicopters. This proposed AD results from a mandatory continuing airworthiness information (MCAI) AD issued by the European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community. The superseding MCAI AD states that several engine flameouts have involved failure of the 41-tooth pinion in the engine accessory gearbox. Each affected helicopter had an APC starter-generator manufactured by one company. Investigation revealed the torque damping system of the starter-generator was inoperative due to incorrect adjustment and caused bending stresses on the 41-tooth pinion. Failure of the pinion causes the engine fuel pump to stop operating and results in an engine flameout. The EASA AD requires a new adjustment procedure to optimize the performance of the specified starter-generator damping assembly. These proposed AD actions are intended to prevent failure of a pinion and a fuel pump, engine flameout, and subsequent loss of control of the helicopter.

DATES: We must receive comments on this proposed AD by January 20, 2011.

ADDRESSES: You may send comments by any of the following methods:
• Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.
• Fax: (202) 493–2251.
• Mail: U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590.
• Hand Delivery: U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Engineer, Rotorcraft Directorate, Safety Engineer, Rotorcraft Directorate, Safety Management Group, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222–5355, fax (817) 222–5961.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written data, views, or arguments about this proposed AD. Send your comments to an address listed in the ADDRESSES section of this proposal. Include “Docket No. FAA–2010–1228; Directorate Identifier 2009–SW–12–AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

The EASA, which is the Technical Agent for the Member States of the European Community, has issued EASA AD No. 2009–0027, dated January 12, 2009, to correct an unsafe condition of the specified ECF model helicopters.

Pending additional investigations, EASA AD No. 2009–0004, dated January 12, 2009, required an inspection of the alignment and torque of the Aircraft Parts Corporation (APC) (currently UNISON) starter-generator damping assembly and, in case of discrepancies, conducting corrective actions. The MCAI AD states that failure of the 41-tooth pinion in the engine accessory gearbox resulted in engine flameouts. Each affected helicopter was equipped with starter-generators manufactured by APC. The additional investigations revealed the torque damping system of the starter-generator was inoperative due to incorrect adjustment. EASA AD No. 2009–0004 required a check of the tightness of the starter-generator damping system and angle measurements.

After further investigation, EASA issued AD 2009–0027, dated February 18, 2009, to require disassembling the damping system, replacing the cup springs and self-locking nut, and reassembling by following a new procedure, which has proven to be more reliable and optimizes the performance of the APC starter-generator damping assembly. The proposed actions are intended to prevent failure of a pinion and a fuel pump, engine flameout, and subsequent loss of control of the helicopter.

You may obtain further information by examining the MCAI AD and any related service information in the AD docket.

Related Service Information

ECF has issued Alert Service Bulletin (ASB) No. 80.00.07, Revision 1, dated February 6, 2009, for the Model AS350 B, BA, BB, B1, B2, and B3 helicopters (ASB 80.00.07); and ASB No. 80A003, Revision 1, dated February 6, 2009, for the Model EC130 B4 helicopter (80A003). The Model AS350 BB helicopter is not type certificated in the United States. ECF has received reports of ARRIEL engine flameouts due to failure of the 41-tooth pinion in the engine accessory gearbox. The failure of this pinion causes the fuel pump to stop and results in engine flameout. The affected helicopters had an APC starter-generator installed. Investigation revealed the torque damping system of the starter-generator to be inoperative due to incorrect adjustment. These ASBs specify disassembly of the damping system, replacing the
Belleville springs (cup springs) and the self-locking nut, and aligning the shaft damping system of the APC starter-generator. The actions described in the MCAI AD are intended to correct the unsafe condition identified in the service information.

FAA’s Evaluation and Unsafe Condition Determination

These products have been approved by the aviation authority of France and are approved for operation in the United States. Pursuant to our bilateral agreement with France, EASA, their Technical Agent, has notified us of the unsafe condition described in the MCAI AD. We are proposing this AD because we evaluated all information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of these same type designs. This proposed AD would require, within 110 hours time-in-service or 3 months, whichever occurs first:

- Modifying and marking the APC starter-generator; and
- Before installing an APC starter-generator with a part number (P/N) of 150SG122Q or 200SG1L130Q, complying with the requirements of this proposed AD.

Differences Between This Proposed AD and the MCAI AD

The MCAI AD refers to flight hours instead of hours time-in-service.

Costs of Compliance

We estimate that this proposed AD would affect about 847 helicopters. We also estimate that it would take about 8 work-hours per helicopter to modify the starter-generator. The average labor rate is $85 per work-hour. ECF states in its ASBs that one nut (P/N 150SG1071, $36.12) and two springs (P/N 150SG1093, $29.14 each) are required for the P/N 150SG122Q starter-generator and one nut (P/N 150SG1071, $36.12) and two springs (P/N 200SG1L93, $33.84 each) are required for the P/N 200SG1L130Q starter-generator. Based on these figures, we estimate the cost of the proposed AD on U.S. operators would be $299,749 ($215,985 for labor and $83,764 for parts), assuming that both starter-generator are evenly distributed in the fleet and that the entire fleet is modified.

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 product(s) identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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, I certify this proposed 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); and
3. 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 proposed 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.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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:


Joint Aircraft System/Component (JASC) Code
(i) The JASC Code is 2435: Starter-Generator.

Issued in Fort Worth, Texas, on December 6, 2010.
Lance T. Gant,
Acting Manager, Rotorcraft Directorate,
Aircraft Certification Service.

ADDRESSES:
That are intended to address the unsatisfactory condition as:

- The proposed AD would require actions or be caused by structural, internal structural, or be caused by, internal structural delamination and/or failure. Such a failure could have a serious effect on the aircraft and could potentially result in a serious condition.

- The outboard three inches of the elevator tip assembly profiles (top and bottom surfaces) had changed from being convex profiles to concave profiles. There is a concern that this could potentially result in, or be caused by, internal structural delamination and/or failure. Such a failure could have a serious effect on the aircraft handling and could potentially result in loss of control of the aircraft.

The proposed AD would require actions that are intended to address the unsafe condition described in the MCAI.

DATES: We must receive comments on this proposed AD by February 4, 2011.

ADDRESSES: You may send comments by any of the following methods:

- Fax: (202) 493–2251.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Airworthiness, Britten-Norman Aircraft Ltd., Bembridge Airport, Isle of Wight, PO35 5PR, United Kingdom; telephone: +44(0) 20 3371 4000; fax: +44(0) 20 3371 4001; e-mail: jim.roberts@bnaircraft.com. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For further information on the availability of this material at the FAA, call 816–329–4148.

Examinin the AD Docket
You may examine the AD docket on the Internet at http://www.regulations.gov; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647–5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT:
Taylor Martin, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329–4138; fax: (816) 329–4090.

SUPPLEMENTARY INFORMATION:
Comments Invited
We invite you to send any written relevant data, views, or comments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA–2010–1255: Directorate Identifier 2010–CE–059–AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion
The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued AD No.: 2009–0105R2, dated March 9, 2010 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

An event has been reported where Glass Fibre Reinforced Plastic (GFRP) elevator tips have been found deformed in in-service aircraft. The outboard three inches of the elevator tip assembly profiles (top and bottom surfaces) had changed from being convex profiles to concave profiles. There is a concern that this could potentially result in, or be caused by, internal structural delamination and/or failure. Such a failure could have a serious effect on the aircraft handling and could potentially result in loss of control of the aircraft.

For the reasons stated above, the initial issue of this AD (AD 2009–0105R1) mandated inspection of the GFRP elevator tips and replacement of any deformed parts. Its Revision 1 (AD 2009–0105R1) extends the compliance time by three months. Its Revision 2 (AD 2009–0105R2) extends the compliance time by an additional three months.

Relevant Service Information
Britten-Norman Aircraft Limited has issued Service Bulletin Number BN–2/ SB 313, Issue 3, dated February 24, 2009; Drawing NB–31–235, Issue 13; Drawing NB–31–873, Issue 2; and Drawing NB–31–0906, Issue 3. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA’s Determination and Requirements of the Proposed AD
This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all the available information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.