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 (FAA), 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 a 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:

- Fax: (202) 493–2251.

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 certified 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 200SG1L30Q, 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 3 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 200SG1L093, $33.64 each) are required for the P/N 200SG1L30Q 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-generators 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:


Comments Due Date

(a) We must receive your comments by January 20, 2011.

Other Affected ADs

(b) None.

Applicability

(c) This AD applies to Model AS350B, B1, B2, B3, BA, and EC130 B4 helicopters with ARRIEL engines with Aircraft Parts Corporation (APC) starter-generators, part number (P/N) 150SG122Q or P/N 200SG1L30Q without “004” marked on the identification plate, installed, certificated in any category.

Reason

(d) The mandatory continuing airworthiness information (MCAI) AD states that several engine flameouts involved failure of the 41-tooth pinion in the engine accessory gearbox that caused the engine fuel pump to fail. Each affected helicopter had an APC Company (currently UNISON) starter-generator installed. Investigation revealed the torque damping system of the starter-generator was inoperative. The EASA AD requires a new adjustment procedure to optimize the performance of the specified 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.

Actions and Compliance

(e) Within 110 hours time-in-service (TIS) or 3 months, whichever occurs first, unless already accomplished, do the following:

(1) Replace the cup springs and fan nut, functionally test the damping system, and after this modification, mark “004” on the identification plate of the APC starter-generator, as depicted in Figures 1 and 2, and by following the Accomplishment Instructions, paragraph 2.B.2., of Eurocopter Alert Service Bulletin (ASB) No. 80.00.07, Revision 1, dated February 6, 2009, for the Model AS350 B, BA, B1, B2, and B3 helicopters; or ASB No. 80A003, Revision 1, dated February 6, 2009, for the Model EC130 B4 helicopter.

(2) Before installing an APC starter-generator with P/N 150SG122Q or P/N 200SG1L30Q, comply with the requirements of this AD.

Differences Between This AD and the MCAI AD

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

Other Information

(g) Alternative Methods of Compliance (AMOCs): The Manager, Safety Management Group, ATTN: DOT/FAA Southwest Region, Ed Cuevas, ASW–112, Aviation Safety Engineer, Rotorcraft Directorate, Safety Management Group, 2601 Meacham Blvd. Fort Worth, Texas 76137, telephone (817) 222–5355, fax (817) 222–5961, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

(b) EASA AD No. 2009–0027, dated February 18, 2009, which supersedes and
DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64


AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for the products listed above. This proposed AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

An event has been reported where Glass Fibre Reinforced Plastic (GFRP) elevator tips have been found deformed on 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 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:

• Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.
• Fax: (202) 493–2251.

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 on 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 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 reasons stated above, the initial issue of this AD (AD 2009–0105) 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 relevant information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.