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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-1537; Directorate Identifier 2015-SW-014-AD; Amendment 39-18160; AD 2015-08-51]

RIN 2120-AA64

Airworthiness Directives; The Enstrom Helicopter Corporation

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are publishing a new airworthiness directive (AD) for Enstrom Helicopter Corporation (Enstrom) Model F-28A, 280, F-28C, F-28C-2, F-28C-2R, 280C, F-28F, F-28F-R, 280F, 280FX, and 480 helicopters. This AD was sent previously to all known U.S. owners and operators of these helicopters and supersedes Emergency AD (EAD) 2015-04-51, dated February 12, 2015. This AD requires inspecting certain main rotor spindles (spindles) for cracks and reporting the inspection results to the FAA. This AD is prompted by a fatal accident and reports of spindles with cracks. The actions specified in this AD are intended to detect a crack in a spindle and prevent loss of a main rotor blade and subsequent loss of control of the helicopter.

DATES: This AD becomes effective June 2, 2015 to all persons except those persons to whom it was made immediately effective by EAD 2015-08-51, issued on April 10, 2015, which contains the requirements of this AD.

We must receive comments on this AD by July 17, 2015.

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

- Federal eRulemaking Docket: Go to http://www.regulations.gov. Follow the online instructions for sending your comments electronically.
- Fax: 202-493-2251.
- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590-0001.
- Hand Delivery: Deliver to the "Mail" address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this AD, contact Enstrom Helicopter Corporation, 2209 22nd Street, Menominee, MI; telephone (906) 863-1200; fax (906) 863-6821; or at www.enstromhelicopter.com. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

FOR FURTHER INFORMATION CONTACT: Gregory J. Michalik, Senior Aerospace Engineer, Chicago Aircraft Certification Office, Small Airplane Directorate, FAA, 2300 East Devon Ave., Des Plaines, IL 60018; (847) 294-7135; email gregory.michalik@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments prior to it becoming effective. However, we invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that resulted from adopting this AD. The most helpful comments reference a specific portion of the AD, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit them only one time. We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this rulemaking during the comment period. We will consider all the comments we receive and may conduct additional rulemaking based on those comments.

Discussion

On February 12, 2015, we issued EAD 2015-04-51, which was prompted by a fatal accident. Preliminary results of the investigation indicated that the accident was caused by a crack in the spindle, which resulted in the main rotor blade separating from the helicopter. The crack was discovered at the last thread of the spindle retention nut threads. While the investigation could not determine when the crack initiated, it was able to determine that the crack existed, undetected, for a significant amount of time before the separation. EAD 2015-04-51 required, before further flight, conducting a magnetic particle inspection (MPI) in any spindle that had 5,000 or more hours time-in-service (TIS) or where the hours TIS of the spindle is not known. If there was a crack in the spindle, EAD 2015-04-51 required replacing it before further flight. EAD 2015-04-51 also required reporting the inspection results to the FAA within 72 hours.

Since we issued EAD 2015-04-51, inspection reports received by the FAA indicate approximately 20% of the spindles reported with TIS data had evidence of cracks. The FAA also received inspection reports of spindles without TIS data which did not have evidence of cracks. The inspection reports include spindles with cracks at less than 5,000 hours TIS. With analysis of available data, we determined the need to expand the applicability to include spindles with 1,500 or more hours TIS.

On April 10, 2015, we issued EAD 2015-08-51, which supersedes EAD 2015-04-51. EAD 2015-08-51 retains all of the requirements of EAD 2014-04-51 except it reduces the TIS of the spindles to be inspected from 5,000 hours to 1,500 hours. EAD 2015-08-51 was sent previously to all known U.S. owners and operators of these helicopters.

FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

Related Service Information

Enstrom has issued Service Directive Bulletin No. 0119, Revision 1, dated April 1, 2015, for all serial numbered Model F-28A, F-28C, F-28F, 280, 280C, 280F, and 280FX helicopters with a main rotor spindle, part number (P/N) 28-14282-11 and 28-14282-13. Enstrom has also issued Service Directive Bulletin No. T-050, Revision 1, dated April 1, 2015, for Model 480 helicopters, serial numbers 5001 through 5004 and 5006, and with a main rotor spindle, P/N 28-14282-13, except those aircraft modified with tension-torsion straps. Both service directives specify, for any spindle that has been in service more than 3,500 hours, within 5 hours TIS, sending the spindle to Enstrom for an MPI. For any spindle with less than 3,500 hours TIS, the service directives specify sending the spindle to Enstrom for an MPI at or before it reaches 3,500 hours TIS. The service directives also specify repeating the MPI every 300 hours for spindles with over 3,500 hours TIS.

AD Requirements

This AD requires conducting an MPI before further flight to determine if a crack exists in any spindle that has 1,500 or more hours TIS or where the hours TIS of the spindle is not known. If there is a crack in the spindle, this AD requires replacing it before further flight. The MPI of the spindle must be conducted by a Level II or Level III inspector qualified in the MPI method in the Aeronautics Sector according to the EN4179 or NAS410 standard or equivalent. This AD also requires reporting certain information to the FAA within 72 hours.

Differences Between This AD and the Service Information

This AD requires that the MPI be conducted by a Level II or Level III inspector or equivalent and that the results of the MPI be reported to the FAA, whereas the service information specifies that the MPI be accomplished by or reported to Enstrom. This AD requires an MPI on spindles with 1,500 or more hours TIS, whereas the service information specifies performing an initial MPI on spindles with 3,500 or more hours TIS. This AD does not require a recurring inspection, whereas the service information specifies to repeat the MPI every 300 hours TIS for spindles with over 3,500 hours TIS. This AD requires the MPI before further flight, whereas the service information specifies that it be accomplished within 5 hours TIS.

Interim Action

We consider this AD to be an interim action. The inspection reports that are required by this AD will enable us to obtain better insight into the root cause and extent of the cracking, and eventually to develop final action to address the unsafe condition. Once final action has been identified, we might consider further rulemaking.

Costs of Compliance

We estimate that this AD affects 323 helicopters of U.S. Registry and that operators may incur the following costs to comply with this AD. Inspecting the spindles will take about 15 work-hours per helicopter and reporting the required inspection information will take about 0.5 work-hour. We estimate an average labor rate of $85 per work-hour, for a total cost of $1,318 per helicopter and $425,714 for the U.S. fleet. Replacing a spindle will cost $8,164 for parts and no additional work-hours.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this AD is 2120-0056. The paperwork cost associated with this AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting required by this AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at 800 Independence Ave. SW., Washington, DC 20591. ATTN: Information Collection Clearance Officer, AES-200.

FAA's Justification and Determination of the Effective Date

Providing an opportunity for public comments prior to adopting these AD requirements would delay implementing the safety actions needed to correct this known unsafe condition. Therefore, we found and continue to find that the risk to the flying public justifies waiving notice and comment prior to the adoption of this rule because the previously described unsafe condition can adversely affect the controllability of the helicopter and the initial required action must be accomplished before further flight.

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment before issuing this AD were impracticable and contrary to the public interest and good cause existed to make the AD effective immediately by EAD 2015-08-51, issued on April 10, 2015, to all known U.S. owners and operators of these helicopters. These conditions still exist and the AD is hereby published in the Federal Register as an amendment to section 39.13 of the Federal Aviation Regulations (14 CFR 39.13) to make it effective to all persons.

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

We determined that 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, 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):

2015-08-51 The Enstrom Helicopter Corporation (Enstrom): Amendment 39-18160; Docket No. FAA-2015-1537; Directorate Identifier 2015-SW-014-AD.

(a) Applicability

This AD applies to Enstrom Model F-28A, 280, F-28C, F-28C-2, F-28C-2R, 280C, F-28F, F-28F-R, 280F, and 280FX helicopters, all serial numbers; and Enstrom Model 480 helicopters, serial numbers 5001 through 5006; with a main rotor spindle (spindle), part number (P/N) 28-14282-11 or 28-14282-13, installed, certificated in any category. This AD applies to any helicopter that has a spindle with 1,500 or more hours time-in-service (TIS) or where the hours TIS of the spindle is not known.

(b) Unsafe Condition

This AD defines the unsafe condition as a crack in the spindle, which, if not detected, could result in loss of a main rotor blade and subsequent loss of control of the helicopter.

(c) Affected ADs

This AD supersedes Emergency AD 2015-04-51, Directorate Identifier 2015-SW-002-AD, dated February 12, 2015.

(d) Effective Date

This AD becomes effective June 2, 2015 to all persons except those persons to whom it was made immediately effective by Emergency AD 2015-08-51, issued on April 10, 2015, which contains the requirements of this AD.

(e) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has been accomplished on or after February 11, 2015.

(f) Required Actions

(1) Before further flight, conduct a magnetic particle inspection (MPI) of the spindle to determine if a crack exists, paying particular attention to the threaded portion of the spindle. The MPI of the spindle must be conducted by a Level II or Level III inspector qualified in the MPI in the Aeronautics Sector according to the EN4179 or NAS410 standard or equivalent. If there is a crack in the spindle, replace it with an airworthy spindle before further flight.

(2) Within 72 hours after accomplishing the MPI, report the information requested in Appendix 1 to this AD by mail to the Manager, Chicago Aircraft Certification Office, Federal Aviation Administration, ATTN: Gregory J. Michalik, 2300 East Devon Ave., Des Plaines, IL, 60018; by fax to (847) 294-7834; or email to gregory.michalik@faa.gov.

(g) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Chicago Aircraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Gregory J. Michalik, Senior Aerospace Engineer, Chicago Aircraft Certification Office, Small Airplane Directorate, FAA, 2300 East Devon Ave., Des Plaines, IL, 60018; (847) 294-7135; email gregory.michalik@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.

(3) Any AMOC approved previously in accordance with EAD 2015-04-51, dated February 12, 2015, is approved as an AMOC for the corresponding requirements in paragraph (f)(1) of this AD.

(h) Additional Information

Enstrom Helicopter Corporation Service Directive Bulletin No. 0119, Revision 1, dated April 1, 2015, and Enstrom Helicopter Corporation Service Directive Bulletin No. T-050, Revision 1, dated April 1, 2015, which are not incorporated by reference, contain additional information about the subject of this AD. For service information identified in this AD, contact Enstrom Helicopter Corporation, 2209 22nd Street, Menominee, MI; telephone (906) 863-1200; fax (906) 863-6821; or at www.enstromhelicopter.com. You may review this service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

(i) Subject

Joint Aircraft Service Component (JASC) Code: 6220, Main Rotor Head.

Appendix 1 to AD 2015-08-51

Spindle Inspection (Sample Format)

Provide the following information by mail to the Manager, Chicago Aircraft Certification Office, Federal Aviation Administration, ATTN: Gregory J. Michalik, 2300 East Devon Ave., Des Plaines, IL, 60018; by fax to (847) 294-7834; or email to gregory.michalik@faa.gov.

Aircraft Registration No.:
Helicopter Model:
Helicopter Serial Number:
Helicopter Owner or Operator:
Contact Phone No.:
Spindle Part Number and Serial Number:
Total Hours Time-in-Service (TIS) on Spindle:
Total Hours TIS on Helicopter (if hours TIS on spindle were not available):
Who Performed the Inspection:
Date and Location Inspection was Accomplished:
Crack Found? If yes, describe the crack size, location, orientation (provide a sketch or picture):
Provide Any Other Comments:

Issued in Fort Worth, Texas, on May 8, 2015.
Lance T. Gant,
Acting Directorate Manager, Rotorcraft Directorate,
Aircraft Certification Service.