



Airworthiness Directive

AD No.: 2016-0221

Issued: 04 November 2016

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:

ENSTROM HELICOPTER CORPORATION

Type/Model designation(s):

F-28 and 480 helicopters

Effective Date: 18 November 2016

TCDS Number(s): EASA.IM.R.122

Foreign AD: Federal Aviation Administration (FAA) AD 2015-08-51 dated 18 May 2015.

Supersedure: None

ATA 62 – Main Rotor – Main Rotor Spindle – Inspection

Manufacturer(s):

Enstrom Helicopter Corporation

Applicability:

Enstrom F-28A, F-28C, F-28C-2, F-28F, F-28F-R, 280, 280C, 280F and 280FX helicopters, all variants, all serial numbers; and Enstrom 480 helicopters, all serial numbers.

Reason:

In January 2015, a fatal accident occurred with an Enstrom 280FX helicopter. Preliminary results of the investigation indicated that the accident was caused by a crack in the spindle, which resulted in the separation of the main rotor blade from the helicopter. 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.

This condition, if not detected and corrected, could result in loss of a main rotor blade and consequent loss of control of the helicopter.

Prompted by these findings, Enstrom issued Service Directive Bulletin (SDB) No. 0119 and No. T-050 (later revised three times), providing instructions for repetitive inspections of the spindles to detect



cracks. Consequently, the FAA, the State of Design authority for the affected helicopter type, issued AD 2015-08-51, which was adopted by EASA, applicable to helicopters that have a spindle installed with 1 500 or more flight hours (FH) accumulated since first installation, or where the FH of the spindle are unknown. That AD requires a one-time magnetic particle inspection (MPI) of the spindle to determine if a crack exists, and, if a crack is found, to replace it with an airworthy spindle.

The FAA AD does not require repetitive inspections, whereas the Enstrom SDB specifies to repeat the MPI every 500 FH for spindles with over 1 500 FH. EASA has determined that these inspections are necessary to ensure the continued airworthiness of the affected helicopters. It is expected that the FAA will take AD action to require these inspections, but EASA has no information on when that AD will be issued.

For the reason described above, this AD requires repetitive inspections of the affected spindles to detect cracks and, depending on findings, replacement.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Note 1: For the purpose of this AD, an affected main rotor (MR) spindle is identified by Part Number (P/N) 28-14282-11 or P/N 28-14282-13.

- (1) Within the compliance time specified in Table 1 of this AD, and, thereafter, at intervals not to exceed 500 FH, remove each affected MR spindle (see Note 1 of this AD) from the helicopter to accomplish an MPI in accordance with the instructions of Enstrom SDB No. 0119, Revision 3, or SDB No. T-050, Revision 3, as applicable, hereafter referred to collectively as 'the applicable SDB' in this AD.

Table 1 – Spindle Inspection

Compliance Time (A or B, whichever occurs later)	
A	Before exceeding 1 500 FH since first installation on a helicopter
B	Within 500 FH after an MPI in accordance with the instructions of the applicable SDB

- (2) Inspections of an MR spindle, accomplished before the effective date of this AD in accordance with the instructions of Enstrom SDB No. 0119 at original issue, Revision 1 or Revision 2, or SDB No. T-050 at original issue, Revision 1 or Revision 2, as applicable, are acceptable to comply with the initial inspection requirements of paragraph (1) of this AD for that MR spindle.
- (3) From the effective date of this AD, installation on a helicopter of an affected MR spindle (see Note 1 of this AD) is allowed, provided that the MR spindle is a serviceable spindle (see Note 2 of this AD).

Note 2: For the purpose of this AD, a serviceable affected MR spindle has not exceeded 1 500 FH since first installation on a helicopter, or has not exceeded 500 FH after having passed an MPI in accordance with the instructions of the applicable SDB.



Ref. Publications:

Enstrom Helicopter Corporation SDB No. 0119, original issue dated 11 February 2015, or Revision 1 dated 1 April 2015, or Revision 2 dated 1 June 2015, or Revision 3 dated 24 June 2016.

Enstrom Helicopter Corporation SDB No. T-050, original issue dated 11 February 2015, or Revision 1 dated 1 April 2015, or Revision 2 dated 1 June 2015, or Revision 3 dated 24 June 2016.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. This AD was posted on 04 October 2016 as PAD 16-141 for consultation until 01 November 2016. No comments were received during the consultation period.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. For any question concerning the technical content of the requirements in this AD, please contact: Enstrom Helicopter Corporation, 2209 22nd Street, Menominee, Michigan 49858, United States of America, Telephone: +1 906-863-1200, Fax: +1906-863-6621
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