AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Enstrom F-28 Series Helicopters

AD/ENST 28/40 Main Rotor Push Pull Rod 11/2007 DM

Applicability: Enstrom Helicopter Company Model F-28A, F-28C, and F-28F helicopters, excluding serial number (S/N) 816 and subsequent; Model 280, 280C, 280F, and 280FX helicopters, excluding S/N 2100 and subsequent; and Model TH-28, 480, and 480B helicopters, excluding S/N 5058 and subsequent.

Requirement:

1. Review the helicopter maintenance records and determine the date that each push-pull rod, part number (P/N) 28-16253 - all dash numbers (for Model F-28A, F- 28C, F-28F, 280, 280C, 280F, and 280FX helicopters) and P/N 4140532 - all dash numbers (for Model TH-28, 480, and 480B helicopters), was installed. If the date cannot be determined from the maintenance records, use the ``Date MFD", which is located on the helicopter data plate, as the installation date for the push-pull rod.

2. For Model F-28A, F-28C, F-28F, 280, 280C, 280F, and 280FX helicopters, visually inspect the exterior and interior of each of the three push-pull rods for corrosion severe enough to cause pitting or any moisture, paying special attention to the area of the lower fitting, in accordance with section 5.1., INSPECTION, in Enstrom Helicopter Corporation Service Directive Bulletin No. 0096, dated 10 September 2003 (SDB 0096).

Table 1

Helicopter models	Push-pull rod service life	Compliance times
Model F-28A, F-28C, F-28F, 280, 280C, 280F, and 280FX helicopters.	Push-pull rod that has been installed for 20 or more years.	Inspect within 10 hours time-in-service (TIS) or at next annual inspection, whichever occurs first.
Model F-28A, F-28C, F-28F, 280, 280C, 280F, and 280FX helicopters.	Push-pull rod that has been installed for 10 or more years, but less than 20 years.	Inspect within 50 hours TIS or at the next annual inspection, whichever occurs first.
Model F-28A, F-28C, F-28F, 280, 280C, 280F, and 280FX helicopters.	Push-pull rod that has been installed for less than 10 years.	Inspect before the service life of the push-pull rod reaches 10 years since initial installation.

Enstrom F-28 Series Helicopters

AD/ENST 28/40 (continued)

a) If corrosion without pitting is found on a push-pull rod, then repair, reassemble, remark, and reinstall it in accordance with section 5.2., REPAIR/REASSEMBLY, in SDB 0096.

b) If corrosion is found that is severe enough to cause pitting, or if any moisture is visible on the inside of a push-pull rod, replace it with an airworthy push-pull rod.

Note 1: Determining continued serviceability of the push-pull rods by inspecting the exterior only of each push-pull rod is described in Enstrom Helicopter Corporation Service Information Letter No. 0156, dated 9 December 2003.

3. For Model TH-28, 480 and 480B helicopters, visually inspect the exterior and interior of each of the three push-pull rods for corrosion severe enough to cause pitting or any moisture, paying special attention to the area of the lower fitting, in accordance with section 5.1., INSPECTION, in Enstrom Helicopter Corporation Service Directive Bulletin No. T-019, dated 10 September 2003 (SDB T-019).

Table 2

Helicopter models	Push-pull rod service life	Compliance times
Model TH-28, 480, and 480B helicopters.	Push-pull rod that has been installed for 10 or more years.	Inspect within 50 hours TIS or at the next annual inspection, whichever occurs first.
Model TH-28, 480, and 480B helicopters.	Push-pull rod that has been installed for less than 10 years.	Inspect before the service life of the push-pull rod reaches 10 years since initial installation.

a) If corrosion without pitting is found on a push-pull rod, then repair, reassemble, remark, and reinstall it in accordance with section 5.2., REPAIR/REASSEMBLY, in SDB T-019.

b) If corrosion is found that is severe enough to cause pitting, or if any moisture is visible on the inside of a push-pull rod, replace it with an airworthy push-pull rod.

Note 2: Determining continued serviceability of the push-pull rods by inspecting the exterior only of each push-pull rod is described in Enstrom Helicopter Corporation Service Information Letter No. T-019.

Note 3: FAA AD 2007-11-02 Amdt 39-15059 dated 5 July 2007 refers.

Enstrom F-28 Series Helicopters

AD/ENST 28/40 (continued)

Compliance:

1. Within 10 hours time-in-service (TIS) or at the next annual inspection, whichever occurs first after the effective date of this AD.

2. In accordance with the compliance times stated in Table 1 of this AD.

   a) Before further flight, after the effective date of this AD.

   b) Before further flight, after the effective date of this AD.

3. In accordance with the compliance times stated in Table 2 of this AD.

   a) Before further flight, after the effective date of this AD.

   b) Before further flight, after the effective date of this AD.

This Airworthiness Directive becomes effective on 2 October 2007.

Background: This AD requires the determining of the installation dates for each main rotor push-pull control rod (push-pull rod), inspecting the push-pull rods for corrosion, replacing any push-pull rod which has corrosion that is severe enough to cause pitting, or has visible moisture inside the rod, and repairing each push-pull rod that has corrosion but no pitting. This is prompted by one reported incident in which the helicopter pilot encountered severe in-flight vibration due to the failure of a push-pull rod, requiring an emergency landing. The actions specified by this AD are intended to detect corrosion and prevent failure of a push-pull rod, and subsequent loss of control of the helicopter.

Charles Lenarcic
Delegate of the Civil Aviation Safety Authority

30 August 2007