AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/ENST 28/9 Amdt 3 and issues the following AD under subregulation 39.1 (1) of CAR 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 28/9 Amdt 4 — Main Rotor Mast — 10/2002 DM

Applicability: Model F-28, F-28A, F-28C, F-28F, 280, 280C, 280F, and 280FX helicopters.

Requirement:

1. Determine the part number of the main rotor transmission, and the radius of the upper fillet of the shaft as specified in Figure 1 of Enstrom Helicopter Corporation Service Directive Bulletin (SDB) No. 0094 Revision 2, dated 15 February 2002.

2. For Model F-28C, F-28F, 280C, 280F, and 280FX helicopters, replace any transmission having a small radius shaft fillet with a serviceable transmission having large radius fillet as specified in Table 1 of SDB No. 0094 Revision 2.

3. For Model F-28, F-28A, and 280 helicopters:

   (a) If the transmission has a shaft with a small radius fillet and the transmission part number is not listed in Table 1 of SDB No. 0094 Revision 2, replace the transmission with a serviceable transmission specified in Table 1 of SDB No. 0094 Revision 2.

   (b) If the installed transmission is part number 28-13101-1 or -1-R, or part number 28-13101-3 or -3-R, and has a small radius shaft, visually inspect each transmission for a crack in the shaft upper fillet using a 10X or higher magnifying glass.

      (i) If a crack is suspected, before further flight, dye-penetrant inspect the shaft.

      (ii) If the shaft is cracked, before further flight, replace the transmission with a serviceable transmission having a large radius shaft fillet.

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AD/ENST 28/9 Amdt 4 (continued)

(c) If the transmission is part number 28-13101-1 or -1-R, or part number 28-13101-3 or -3-R:

(i) Dye-penetrant inspect the shaft upper fillet for a crack, a nick, or a scratch.

(ii) Polish out nicks or scratches less than 0.005-inch deep.

(iii) If the shaft is cracked or has a nick or scratch 0.005-inch or more deep, replace the transmission with a serviceable transmission having a large radius shaft fillet before further flight.

(d) Replace transmission, part number 28-13101-1 or -1-R, or 28-13101-3 or -3-R with a serviceable transmission having a large radius shaft fillet.

Note 1: Installing a serviceable transmission with a shaft, part number 28-13104-1 or -1-R, Revision K, L, M, N, P, R, or S, or part number 28-13140-1 or -1-R, is terminating action for the requirements of this Directive.

Note 2: FAA AD 2002-08-03 Amdt 39-12710 refers.

Compliance:

1. Before further flight after 28 August 2002, unless already accomplished.

2. Before further flight after 28 August 2002, unless already accomplished.

3. a. Before further flight after 28 August 2002, unless already accomplished.

   b. Unless the initial inspection is already accomplished, before further flight after 28 August 2002. Thereafter at intervals not to exceed 25 hours time in service.

   c. Unless the initial inspection is already accomplished, within 5 hours time in service after 28 August 2002. Thereafter at intervals not to exceed 100 hours time in service.

   d. Unless already accomplished, within 300 hours time in service after 28 August 2002 or at the next overhaul, whichever occurs first.

This Amendment becomes effective on 28 August 2002.

Enstrom F-28 Series Helicopters

AD/ENST 28/9 Amdt 4 (continued)

Background: Emergency FAA AD 76-17-08 required repetitive inspections of the shoulder radius of the main rotor shaft.

Amendment 1 reduced the dye-penetrant inspection periods following further investigation by the manufacturer.

Amendment 2 removed from service main rotor shafts not modified in accordance with SDB No. 0036.

Amendment 3 was prompted by the failure of a shaft on a Model F-28A helicopter due to a fatigue crack. This Directive added models previously unaffected, which have a “small radius fillet” main rotor shaft installed.

Amendment 4 is issued in response a new FAA AD which adds additional main rotor gearbox part numbers to the AD requirement.

Amendment 3 of this Airworthiness Directive became effective on 28 November 2001.

David Alan Villiers
Delegate of the Civil Aviation Safety Authority

22 August 2002

The above AD is notified in the *Commonwealth of Australia Gazette* on 28 August 2002.