Bell Helicopter Textron Canada (BHTC) 407 Series Helicopters

AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/BELL 407/1 Amdt 4 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.

AD/BELL 407/1 Amdt 5 — Never Exceed Speed Reduction — 6/2001 DM

Applicability: All BHTC Model 407 helicopters.

Requirement:

1. Remove the copy of AD/BELL 407/1 Amdt 4 from the front of the Flight Limitations section of the Aircraft Flight Manual and advise all pilots of its removal.

2. Remove the Vne limitation placard and airspeed indicator redline limits which were installed in accordance with AD/BELL 407/1 Amdt 4.

3. Unless already accomplished, install an airspeed actuated pedal stop in accordance with BHTC Alert Service Bulletin (ASB) 407-99-33.

4. Unless already accomplished, Replace the Vne placards in accordance with ASB 407-99-33, remove the temporary instrument markings and install new airspeed limitations decals in accordance with Part II of ASB 407-99-33, and remove all Temporary Revisions to the AFM inserted by previous Directive amendments and insert Temporary Revision titled Vne Increase to 140 KIAS dated 17 December 1999.

Note 1: Requirements 3 and 4 were originally required by AD/BELL 407/1 Amdt 3 with a compliance time of 31 January 2001. As AD/BELL 407/1 Amdt 4 had an effective date of 11 January 2001, the compliance time of amendment 3 was never met.

Note 2: Transport Canada AD CF-2001-01R1 refers.

Compliance: Before 31 May 2001.

This Amendment becomes effective on 26 April 2001.

Background: Transport Canada had received three reports of Model 407 helicopter accidents in which the aft section of the tail boom was severed by the tail rotor. In two of the cases an unexpected right yaw, followed by a large left directional control input, were reported prior to the tail boom strike. The actions required by this Directive were to minimise the risk of a tail boom strike during flight; pending further engineering towards reinstatement of 140 KIAS Vne.

Amendment 1 mandated the technical provisions of ASB 407-99-27, and allowed an increased Vne of 130 KIAS up to 20 degrees C and 125 KIAS above 20 degrees C.

Amendment 2 allowed an increase in Vne to 130 KIAS above 20 degrees C, as a result of flight tests at elevated temperatures.

Amendment 3 required installation (before 31 January 2001) of a pedal stop which repositioned itself relative to airspeed, and so provided terminating action for the Directive.

Amendment 4 was prompted by an accident in which a helicopter flying at 140 knots was destroyed by suspected tail rotor strike to the tail boom. Pending further evaluation of the accident, to minimise the risk of a tail boom strike during flight, the never-exceed speed (Vne) is to be reduced.

Amendment 5 is issued in response to a revision of the related Transport Canada AD which removes the current Vne restriction imposed as a result of an accident. The accident investigation has revealed no data to confirm a tail rotor strike as the cause.

Amendment 4 of this Directive became effective on 12 January 2001.

Amendment 3 of this Directive became effective on 18 May 2000.

The original issue of this Directive became effective on 20 May 1999.

David Alan Villiers
Delegate of the Civil Aviation Safety Authority

19 April 2001

The above AD is notified in the *Commonwealth of Australia Gazette* on 26 April 2001.