Airworthiness Directive

Alpha HR200 Series and R2000 Series Aircraft

CIVIL AVIATION AUTHORITY OF NEW ZEALAND

Issued by the Civil Aviation Authority of New Zealand in accordance with section 72I(3A) of the Civil Aviation Act. An Airworthiness Directive (AD) contains regulatory information which is mandatory. An operator of an aircraft must not operate the aircraft unless the operator complies with every applicable AD issued by the Director in accordance with section 72I(3A) of the Civil Aviation Act. An AD is issued where the Director believes on reasonable grounds that an unsafe condition exists in an aircraft or aeronautical product.

DCA/R2000/23B Rudder Pedal Bars – Inspection and Replacement

Applicability: Model R 2100, R 2100 A, R 2112, R 2120 U, R 2160, R 2160 D and R 2160 I aircraft, S/Ns 1 through 378 not fitted with reinforced rudder bars P/N 27.40.31.010 and P/N 27.40.31.020.

Model HR 200/100, HR 200/100S, HR 200/120, HR 200/120B and HR 200/160 aircraft, S/Ns 1 through 378 not fitted with reinforced rudder bars P/N 27.40.31.010 and P/N 27.40.31.020.

Note 1: This AD supersedes DCA/2000/23A which superseded DGAC F-1995-217 and referred to Avions Pierre Robin Service Bulletin No. 143. This AD also supersedes DCA/R2000/16 which superseded DGAC F-1986-148R1 and referred to Avions Pierre Robin SB 109. Revision B of this AD expands on the aircraft applicability and reduces the inspection interval for unmodified HR 200 and R2120U aircraft.

Note 2: This AD is considered embodied if reinforced rudder bars are already installed in accordance with DCA/R2000/23, DCA/R2000/23A or DGAC F-1995-217.

Note 3: The installation of rudder bars P/N 27.40.31.010 and P/N 27.40.31.020 is a terminating action to the requirements of this AD.

Note 4: This AD is not applicable to the R2000 series aircraft manufactured by Alpha Aviation. These aircraft are fitted with reinforced rudder bars at manufacture.

Requirement: To prevent distortion of the rudder bars due to rudder control forces during aerobatic operation and nose wheel steering reaction forces, accomplish the following:

1. For R 2000 series aircraft

Replace the left rudder bar P/Ns 27.23.05.010 and the right rudder bar P/N 27.23.05.020 with reinforced rudder bars P/N 27.40.31.010 and P/N 27.40.31.020 respectively, per Alpha Aviation Service Bulletin AA-SB27-003.

2. For HR 200 and R 2120 U aircraft

Check the geometrical shape of both the rudder bars in accordance with Fig 1. Maintain the rudder bars in the neutral position and measure distances G1, G2 and D1, D2 (the distance between the foot tubes and the front face of the frame box located under the seats). The difference between G1 and G2, or D1 and D2 is the distortion.

a. If D1 =D2 and G1 =G2 (+/- 5mm), there is no significant distortion and no action is required, re-inspect at intervals not to exceed 500 hours TIS.

b. If the distortion is between 5 and 10 mm re-inspect at intervals not to exceed 100 hours, until replaced by rudder bars P/N 27.40.31.010 and P/N 27.40.31.020 per AA–SB-27-003.

c. If the distortion is equal to or greater than 10mm, replace both rudder bars per AA–SB-27-003.

Drafted: 25/10/2007

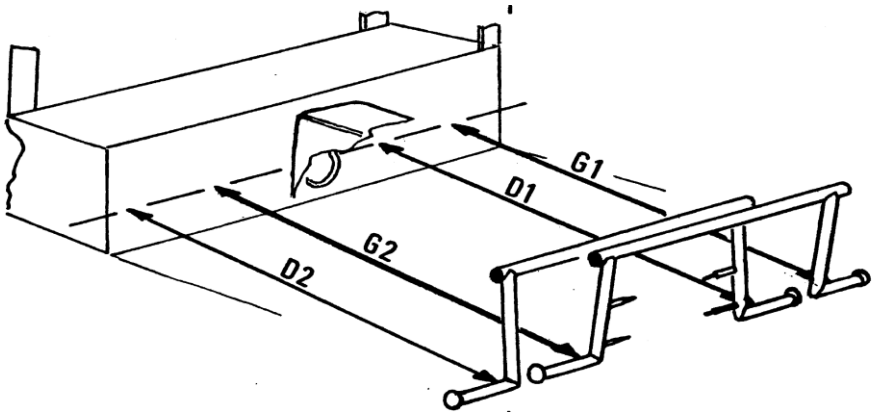

Figure 1

Note 5: Reinforced rudder bars P/N 27.40.31.010 and P/N 27.40.31.020 have a flat welded reinforcing gusset on the RH side and a bent welded reinforcing gusset on the LH side. Refer AA-SB-27-003 for details.

Compliance: 1. Within the next 50 hours TIS or by 31 January 2008, whichever is the sooner,

2. Within the next 100 hours TIS, unless already accomplished in accordance with DCA/R2000/23A or DGAC F-1995-217, and thereafter at the intervals specified in requirement 2, until both rudder bars are replaced with P/N 27.40.31.010 and P/N 27.40.31.020.

Effective Date: DCA/R2000/23 - 29 June 2006

DCA/R2000/23A - 28 September 2006

DCA/R2000/23B - 25 October 2007